## STATE OF NORTH CAROLINA

#### IN THE GENERAL COURT OF JUSTICE SUPERIOR COURT DIVISION 18 CVS 014001

COUNTY OF WAKE

COMMON CAUSE, et al.,

Plaintiffs,

v.

DAVID LEWIS, IN HIS OFFICIAL CAPACITY AS SENIOR CHAIRMAN OF THE HOUSE SELECT COMMITTEE ON REDISTRICTING, et al.,

Defendants.

PLAINTIFFS' PRETRIAL MEMORANDUM

#### INTRODUCTION

Partisan gerrymandering is an existential threat to democracy in North Carolina.

Republicans in the North Carolina General Assembly have egregiously rigged the state legislative district lines to guarantee that their party will control both the North Carolina House of Representatives and the North Carolina Senate regardless of how the people of North Carolina vote. This attack on representative democracy and North Carolinians' voting rights is wrong. It violates the North Carolina Constitution. And only the courts of this State can bring it to an end.

In 2011, following a national movement by the Republican Party to entrench itself in power through control over redistricting, Legislative Defendants' mapmaker manipulated district boundaries with surgical precision to maximize the political advantage of Republican voters and minimize the representational rights of Democratic voters. And it worked: in the 2012, 2014, and 2016 elections, Republicans won veto-proof super-majorities in both chambers of the General Assembly. Then, in 2017, after federal courts stuck down some of the 2011 districts as illegal racial gerrymanders, Republicans redoubled their efforts to gerrymander the district lines on partisan grounds. Evidence from the mapmaker's own files shows his laser-like focus on drawing new districts in 2017 to maximize the political advantage of Republicans.

And again, it worked. The votes that North Carolinians cast in elections should matter, but Legislative Defendants' mapmaker produced maps where their votes don't matter. Despite the Democratic wave of 2018, in which Democratic candidates won a majority of the statewide vote in both state House and Senate races, Republicans still won a substantial majority of seats in each chamber. Republicans won more seats in each chamber than they would have under a non-partisan map that accounts for the state's political geography. Democrats simply could not overcome the seawall of the Republican gerrymander.

It gets worse. Because North Carolina is one of only a few states in the country where the Governor lacks the power to veto redistricting legislation, the General Assembly alone will control the next round of redistricting after the 2020 census. So as things currently stand, the Republican majorities in the General Assembly elected under the current maps will have free rein to redraw both state legislative and congressional district lines for the next decade. In other words, representatives elected under one gerrymander can enact new gerrymanders to maintain their control of the state legislature and rig elections for ten more years. North Carolina courts, applying the North Carolina Constitution, stand as the only bulwark against the subversion of representative democracy in this state, decade after decade after decade, in perpetuity.

The North Carolina Constitution prohibits partisan gerrymandering. This state's equal protection guarantees provide more robust protection for voting rights than the federal constitution. Specifically, "[i]t is well settled in this State that the right to vote *on equal terms* is a fundamental right." *Stephenson v. Bartlett*, 355 N.C. 354, 378, 562 S.E.2d 377, 393 (N.C. 2002) (emphasis added). There is nothing "equal" about the "terms" on which North Carolinians vote for candidates for the General Assembly under the 2017 Plans. North Carolina's Constitution also commands that "all elections shall be free"—a provision that has no counterpart at all in the federal constitution. Elections to the North Carolina General Assembly are not "free" when the outcomes of not only individual races, but control of both chambers of the General Assembly itself, are virtually predetermined by partisan actors sitting behind a computer. And the North Carolina Constitution's free speech and assembly guarantees prohibit the General Assembly from burdening the speech and associational rights of voters and organizations because the General Assembly disfavors their political views.

This Court should invalidate the 2017 state House and Senate plans ("2017 Plans") and order new, fair, nondiscriminatory maps for the 2020 elections.

#### FACTS AND EVIDENCE

#### A. Fact Witnesses

Plaintiffs plan to introduce testimony from the following fact witnesses. Unless otherwise indicated, Plaintiffs plan to call these witnesses to testify live at trial.

*Bob Phillips* is the Executive Director of Common Cause North Carolina. He will testify about how the 2017 Plans harm Common Cause and its members. Mr. Phillips also will testify about the process that led to the enactment of the 2017 Plans.

*Wayne Goodwin* is the chair of the North Carolina Democratic Party. He will testify about how the 2017 Plans harm the North Carolina Democratic Party and its members.

Two individual voter-plaintiffs will testify live about how the 2017 Plans affect and injure them.

The remaining individual voter-plaintiffs who do not testify live will instead testify via affidavits, as agreed by the parties. The affidavits will provide testimony establishing each of these individual voter-plaintiffs' standing to sue and their injuries.

Dan Blue is a Democratic member of the North Carolina Senate, representing Senate District 14. He is also the Senate Minority Leader. Senator Blue will testify about the process that led to the enactment of the 2017 Plans, and about the effect of the 2017 Plans on the composition and activities of the General Assembly.

Graig Meyer is a Democratic member of the North Carolina House, representing House District 50. He served as the head of candidate recruitment for Democratic candidates for the House during the 2018 election cycle. Representative Meyer will testify about the process that

led to the enactment of the 2017 Plans, and about the effect of the 2017 Plans on the composition and activities of the General Assembly.

Jon Matthews is a Vice President at Stroz Friedberg, a computer forensics firm retained by Plaintiffs in this case. Mr. Matthews will testify about the authenticity and proper chain of custody of the specific materials from Dr. Hofeller's files that Plaintiffs will introduce at trial. Mr. Matthews has already submitted an affidavit sufficient to establish the authenticity and proper chain of custody for these materials, but will be available to testify live at trial if needed.

Stephanie Hofeller is the daughter of Dr. Hofeller. Ms. Hofeller will testify about her father's work files that she provided to Plaintiffs in response to a lawful subpoena. The parties have agreed to admit Ms. Hofeller's May 17, 2019 trial-preservation deposition in its entirety.

Blake Esselstyn will testify as a fact witness if needed for authenticity and chain of custody purposes with respect to certain of Dr. Hofeller's Maptitude files. While Plaintiffs believe that Mr. Esselstyn's testimony is unnecessary given other evidence Plaintiffs will present for authenticity and chain of custody, he will be available to testify on these issues if necessary.

#### **B.** Expert Witnesses

Plaintiffs plan to call the following expert witnesses to testify live at trial.

Jowei Chen, Ph.D., is an Associate Professor in the Department of Political Science at the University of Michigan, Ann Arbor. Dr. Chen will testify as an expert in, among other things, legislative districting, political geography, and geographic information systems. Dr. Chen will testify that, by using computer simulation programming techniques to produce a large number of nonpartisan districting plans that adhere to traditional districting criteria such as compactness and avoiding splitting municipalities and voting tabulation districts ("VTDs"), he can assess whether an enacted plan is a statistical outlier with respect to its adherence to these traditional criteria and with respect to its partisan makeup. Stated differently, Dr. Chen is able to rigorously assess

whether partisan considerations predominated over, or "subordinated," traditional nonpartisan districting criteria in creating an enacted plan. Applying this methodology to the 2017 Plans, Dr. Chen will testify that the 2017 Plans are extreme statistical outliers in their level of partisan bias favoring Republicans, in their lack of compactness, and in the number of municipalities and VTDs they split. Dr. Chen will testify, among other things, that in the drawing of the 2017 Plans, partisan considerations predominated over traditional nonpartisan districting criteria. Dr. Chen will further testify about the extent to which specific county groupings contain districts that are partisan outliers. He will testify that the 2017 Plans contain districts that are outliers in fifteen specific House county groupings and seven specific Senate county groupings. Dr. Chen will further testify about the extent to which individual Plaintiffs live in districts that are outliers compared to the districts in which those Plaintiffs would live under non-partisan plans.

In addition, Dr. Chen will testify about his analysis of certain files of Dr. Thomas Hofeller, the Legislative Defendants' mapmaker in both 2011 and 2017. Dr. Chen will explain that these files reveal that Dr. Hofeller had substantially completed the 2017 Plans by late June 2017—a month-and-a-half before the "Adopted Criteria" were passed by the Joint Redistricting Committee on August 10, 2017—and that Dr. Hofeller violated the Adopted Criteria by having and viewing racial data on his draft districts. Dr. Chen will also analyze spreadsheets from Dr. Hofeller's files that focused exclusively on partisan considerations while drafting the districts.

Jonathan C. Mattingly, Ph.D., is James B. Duke Professor of Mathematics and Chair of the Department of Mathematics at Duke University in Durham, North Carolina. Dr. Mattingly is also a Professor of Statistical Science at Duke. Dr. Mattingly will testify as an expert in applied mathematics, probability, and statistical science. The approach that Dr. Mattingly will testify

about in this case is the product of a nonpartisan academic research effort that Dr. Mattingly began at Duke before becoming involved in this lawsuit.

Dr. Mattingly uses a mathematical algorithm to create a representative sample of the universe of possible North Carolina redistricting plans that respect traditional districting principles -- and that are comparable to the 2017 Enacted Plans with respect to features like compactness and county, municipal, and precinct splits. Dr. Mattingly has created approximately 1.1 × 10<sup>108</sup> plans for the North Carolina House and approximately 3.7 × 10<sup>93</sup> plans for the North Carolina Senate. Dr. Mattingly will testify that he has analyzed those nonpartisan plans and the 2017 Plans using all of the statewide election results available to him since 2008. He will testify that the 2017 Plans systematically favor the Republican Party and are extreme partisan outliers in comparison to typical plans that respect North Carolina's political geography. He will testify that the chance that the 2017 Plans' extreme pro-Republican bias was unintentional is astronomically small. He will also testify about how the partisan bias in the 2017 Plans protects Republican supermajorities in instances where typical plans would not produce supermajorities, and protects Republican majorities in instances where typical plans would produce Democratic majorities.

Christopher A. Cooper, Ph.D., is Professor and Department Head of Political Science and Public Affairs at Western Carolina University in Cullowhee, North Carolina. Dr. Cooper will testify as an expert in political science, including on the political geography and political history of North Carolina. Dr. Cooper will testify about the disconnect between North Carolina's statewide voting patterns and the electoral outcomes in North Carolina state legislative races after the 2011 round of redistricting. He will discuss specific state House and Senate districts at issue in this case and the electoral impact of their boundaries. Dr. Cooper also will testify about

his analysis of specific county groupings and will explain in detail how the district lines in each relevant county grouping reflect an intentional effort to pack and crack Democratic voters in order to minimize the total number of seats that Democrats win.

Dr. Cooper will also testify about his analysis of certain of Dr. Hofeller's files. He will testify that those files disprove any notion that the Whole County Rule supposedly constrained Dr. Hofeller in using partisan considerations to draw districts lines, or that North Carolina's natural political geography can purportedly explain the partisan composition of districts within certain geographic areas.

Wesley Pegden, Ph.D., is an Associate Professor in the Department of Mathematical Sciences at Carnegie Mellon University. He will testify as an expert in, among other things, probability. Dr. Pegden will testify that, by analyzing how the partisan characteristics of districts change when a series of many small, random changes are made to the existing district lines, he can assess and quantify the extent to which partisan considerations played a role in drawing a redistricting plan. Dr. Pegden will testify that, applying that analysis here, the 2017 Plans made extreme use of partisan considerations. Using a mathematical theorem he developed, Dr. Pegden will testify that the 2017 Plans are more carefully crafted to favor Republicans than nearly all of the trillions upon trillions of possible districting plans that comport with the nonpartisan districting criteria adopted by the General Assembly in August 2017. Dr. Pegden will testify that it is essentially mathematically impossible that this unusual feature of the 2017 Plans occurred by chance, without a deliberate effort to draw district boundaries to advantage Republicans.

Dr. Chen, Dr. Mattingly, and Dr. Pegden each will testify that their respective methodologies account for North Carolina's political geography, including purported natural

clustering of Democratic voters, and that their results establish that political geography is not the cause of the 2017 Plans' extreme pro-Republican bias.

Plaintiffs may also call one additional expert witness, *Lisa Handley*, *Ph.D.*, solely for rebuttal.

#### C. Exhibits

Plaintiffs' Exhibit List is attached hereto as Attachment A. Plaintiffs may introduce additional exhibits for purposes of cross-examination or in rebuttal.

#### **CLAIMS AND LEGAL STANDARDS**

The evidence described above will establish that Plaintiffs have standing, that they have met all of the elements of each of their claims on the merits, and that they are entitled to appropriate relief in the form of new, fair, nondiscriminatory maps for the 2020 elections.

#### A. Standing

As a threshold matter, the evidence will establish that all Plaintiffs have standing. "In order for a plaintiff to have standing to bring a claim, the plaintiff must establish three elements: (1) injury in fact—an invasion of a legally protected interest that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Strates Shows, Inc. v. Amusements of Am., Inc.*, 184 N.C. App. 455, 460, 646 S.E.2d 418, 423 (N.C. Ct. App. 2007) (quotation marks omitted).

The evidence here will establish that all 37 individual voter-plaintiffs have standing to challenge the 2017 Plans, both with respect to the particular districts and county clusters in which they reside and also statewide. The evidence also will establish that both Common Cause and the North Carolina Democratic Party have associational standing to challenge the 2017 Plans

statewide on behalf of their members because (1) at least one member of each association resides in every state House and Senate district statewide and would have standing to sue in his or her own right, (2) the interests this suit seeks to protect are germane to each association's purpose, and (3) the claims asserted and relief requested do not require the participation of individual members in this lawsuit. *See River Birch Assocs. v. City of Raleigh*, 326 N.C. 100, 130, 388 S.E.2d 538, 555 (N.C. 1990). The evidence also will establish that both Common Cause and the North Carolina Democratic Party have organizational standing to sue on their own behalves. *See Creek Pointe Homeowner's Ass'n, Inc. v. Happ*, 146 N.C. App. 159, 168, 552 S.E.2d 220, 227 (N.C. Ct. App. 2001).

#### B. Claims for Relief on the Merits

On the merits, the evidence will establish all of the elements of all three counts set forth in Plaintiffs' Amended Complaint.

First, the evidence will establish that the 2017 Plans violate the North Carolina Constitution's Equal Protection Clause. Article I, Section 19 of the North Carolina Constitution provides that "[n]o person shall be denied the equal protection of the laws." This provision provides greater protection for the voting rights of North Carolinians than the equal protection provisions of the U.S. Constitution. *See Stephenson*, 355 N.C. at 377-80 & n.6, 562 S.E.2d at 393-95 & n.6; *Blankenship v. Bartlett*, 363 N.C. 518, 522-28, 681 S.E.2d 759, 763-66 (N.C. 2009). North Carolina's Equal Protection Clause protects "the fundamental right of each North Carolinian to substantially equal voting power." *Stephenson*, 355 N.C. at 379, 562 S.E.2d at 394. "It is well settled in this State that the right to vote on equal terms is a fundamental right." *Stephenson*, 355 N.C. at 378, 562 S.E.2d at 393 (internal quotation marks omitted). It is further well settled that these North Carolina equal protection principles apply with full force in the redistricting context. *See id.* 

To establish a violation of North Carolina's Equal Protective Clause, Plaintiffs will prove that (1) the 2017 Plans were created with an intent to deprive Plaintiffs and other voters who consistently vote for Democratic candidates of substantially equal voting power or of the right to vote on equal terms; and (2) the 2017 Plans have a discriminatory effect on Plaintiffs and other voters who consistently vote for Democratic candidates by actually depriving them of substantially equal voting power or the right to vote on equal terms. See In re Battle, 166 N.C. App. 240, 245, 601 S.E.2d 253, 256 (N.C. Ct. App. 2004); Stephenson, 355 N.C. at 378, 562 S.E.2d at 393; *Blankenship*, 363 N.C. at 527-28, 681 S.E.2d at 766. Although no further showing is necessary to satisfy the elements of Plaintiffs' equal protection claim, the evidence also will establish that the 2017 Plans substantially disadvantaged Plaintiffs and other voters who consistently vote for Democratic candidates, that discriminating against such voters was Legislative Defendants' predominant intent in crafting the 2017 Plans, and that partisan considerations subordinated traditional nonpartisan districting criteria in the crafting of the 2017 Plans. Once Plaintiffs make out a prima facie case on the elements of discriminatory intent and discriminatory effect, the burden then shifts to Legislative Defendants to establish that the 2017 Plans were narrowly tailored to achieve a compelling government interest. See Stephenson, 355 N.C. at 377-78, 562 S.E.2d at 393. Legislative Defendants can show no compelling interest in intentionally discriminating against voters on the basis of their political beliefs.

Second, the evidence will establish that the 2017 Plans violate the North Carolina Constitution's Free Elections Clause. Article I, Section 10 of the North Carolina Constitution provides that "[a]ll elections shall be free." This clause has no federal counterpart. The General Assembly violates the Free Elections Clause when it attempts to predetermine the outcome of elections by drawing maps designed to ensure that the ballots voters cast will not

matter. Plaintiffs will prove that the outcome of elections under the 2017 Plans is virtually predetermined due to the partisan motivations of those who drew the district lines. An election is not free when the government puts its thumb on the scale to make it more difficult for voters of a particular party to elect their preferred candidate. In a free election, votes should make a difference. *See Clark v. Meyland*, 261 N.C. 140, 142-43, 134 S.E.2d 168, 169-70 (N.C. 1964); *Blankenship*, 362 N.C. at 521-22, 681 S.E.2d at 762-63; *Stephenson*, 355 N.C. at 378, 562 S.E.2d at 393.

It is not just the outcome of individual races for state House and Senate seats that are predetermined or virtually predetermined, but control of each chamber of the General Assembly itself. The purpose of the Free Elections Clause, in conjunction with Article I, Section 9 immediately preceding it, is to facilitate North Carolinians' ability to seek a "redress of grievances and for amending and strengthening the law." John V. Orth & Paul M. Newby, The North Carolina Constitution 56 (2d ed. 2013). The 2017 Plans substantially undermine this purpose by guaranteeing that Republicans will control both chambers of the General Assembly, and ensuring that no matter the party affiliation of their individual representatives, Plaintiffs and other voters who consistently vote for Democratic candidates will never be able to effectively seek redress of grievances with the General Assembly or amend the law in accordance with their preferred policies.

Notably, the Pennsylvania Supreme Court has held that partisan gerrymandering violates the Pennsylvania Constitution's Free and Equal Elections Clause, *League of Women Voters v*. *Commonwealth*, 178 A.3d 737, 814 (Pa. 2018), which, like North Carolina's Free Elections Clause, "originally derives . . . from the English Declaration of Rights (1689)," John V. Orth & Paul M. Newby, The North Carolina Constitution 56 (2d ed. 2013).

Third, the evidence will establish that the 2017 Plans violate the North Carolina Constitution's Freedom of Speech and Freedom of Assembly Clauses. Article I, Section 12 of the North Carolina Constitution provides that "[t]he people have a right to assemble together to consult for their common good, to instruct their representatives, and to apply to the General Assembly for redress of grievances." Article I, Section 14 provides that "[f]reedom of speech and of the press are two of the great bulwarks of liberty and therefore shall never be restrained." North Carolina courts have recognized that these provisions may afford broader protection to the rights of free speech and association than their federal counterparts. *See Evans v. Cowan*, 122 N.C. App. 181, 183-84, 468 S.E.2d 575, 577-78 (N.C. Ct. App.), *aff'd*, 477 S.E.2d 926 (N.C. 1996); *McLaughlin v. Bailey*, 240 N.C. App. 159, 172, 771 S.E.2d 570, 579-80 (N.C. Ct. App. 2015), *aff'd*, 781 S.E.2d 23 (N.C. 2016).

Plaintiffs may establish a violation of these state constitutional provisions, irrespective of their federal counterparts, under either a discrimination theory or a retaliation theory. To establish a violation of these provisions under a discrimination theory, Plaintiffs will prove that (1) Plaintiffs have engaged in protected speech, expression, association, or application for redress of grievances, or are likely to do so, and (2) the 2017 Plans intentionally discriminate against or burden Plaintiffs on the basis of their protected speech or conduct. Once Plaintiffs make out a prima facie case on these elements, the burden then shifts to the Legislative Defendants to establish that the 2017 Plans were narrowly tailored to achieve a compelling government interest. *See State v. Petersilie*, 334 N.C. 169, 206, 432 S.E.2d 832, 853-54 (N.C. 1993).

Alternatively, to establish a violation of these provisions under a retaliation theory,

Plaintiffs will prove that (1) Plaintiffs have engaged in protected speech, expression, association,

or application for redress of grievances, (2) the 2017 Plans take adverse action against Plaintiffs, (3) the 2017 Plans were created with an intent to retaliate against Plaintiffs' protected speech or conduct, and (4) the 2017 Plans would not have taken the adverse action but for that retaliatory intent. *See McLaughlin*, 240 N.C. App. at 172, 771 S.E.2d at 579-80.

#### C. Remedy

Finally, the evidence described above will establish that Plaintiffs are entitled to appropriate relief in the form of new, fair, nondiscriminatory maps drawn in compliance with the North Carolina Constitution in time for the 2020 primary and general elections.

In particular, the evidence will establish that Plaintiffs are entitled to the remedy of new maps drawn in the first instance by the Court, with the aid of a special master. While a North Carolina statute purports to afford the General Assembly an opportunity to redraw state legislative maps if the existing ones are struck down, *see* N.C.G.S.A. § 120-2.4(a), that statute cannot trump this Court's obligation to ensure compliance with the North Carolina Constitution. This Court "cannot turn a blind eye on the record of the Legislature" in repeatedly violating the constitutional rights of the State's citizens in drawing districting plans. *Hays v. State*, 936 F. Supp. 360, 372 (W.D. La. 1996). Over and over again this decade, Legislative Defendants have adopted state legislative and congressional plans that discriminate against voters. The federal courts found that the 2011 state House and state Senate plans constituted among the most pervasive racial gerrymanders in American history, and in response to that decision, Legislative Defendants adopted new plans that intentionally discriminate against voters on the basis of partisanship instead. Legislative Defendants did the exact same with respect to the State's congressional districts.

Courts have held that a legislature forfeits any right to have the opportunity to draw remedial plans where it has repeatedly violated the constitutional rights of voters in drawing districts. *Id.* "The Legislature has left [this Court] no basis for believing that, given yet another chance, it would produce a constitutional plan." *Id.* And there are particularly strong reasons to not afford Legislative Defendants an opportunity to draw news plan here because the evidence will show that they made multiple false or misleading statements to the federal court presiding over the remedial process that led to the existing plans. The evidence will establish that *only* court-drawn remedial maps will reliably cure the constitutional violations here.

In the alternative, if the Court affords the General Assembly an opportunity to attempt to enact remedial maps in the first instance, the General Assembly should be ordered to conduct the *entire* remedial process in public view, should be ordered not to use past election results or other political data to intentionally dilute the voting power of citizens or groups of citizens on the basis of their partisan preferences, should be ordered not to otherwise intentionally dilute the voting power of citizens or groups of citizens on the basis of their partisan preferences, and should be given no more than two weeks to pass new plans. As the Court is aware, time is of the essence. The window for candidates to file for party primary nominations is currently set to open on December 2, 2019, and primary elections are scheduled to be held on March 3, 2020. *See* N.C.G.S.A. §§ 163A-700(b), 163A-974(b). When Plaintiffs filed this lawsuit on November 13, 2018, N.C.G.S.A. § 120-2.4(a) provided in relevant part that a court may not impose a remedial redistricting plan "unless the court first gives the General Assembly a period of time to remedy any defects identified by the court in its findings of fact and conclusions of law," and "[t]hat period of time shall not be less than two weeks."

On December 27, 2018, however, the General Assembly overrode the Governor's veto and enacted an amendment to that statute. The amendment provides that the General Assembly must have at least two weeks to enact a remedial plan, "provided, however, that if the General

Assembly is scheduled to convene legislative session within 45 days of the date of the court order[,] that period of time shall be not less than two weeks from the convening of that legislative session." 2018 North Carolina Laws S.L. 2018-146, § 4.7. This amendment purports to extend the period for the General Assembly to enact a remedial plan from 14 days to up to 69 days, depending on the legislative calendar. That amendment cannot apply retroactively to this case, which was filed before the amendment was enacted. In any event, it cannot trump the North Carolina Constitution, which—regardless of the legislative calendar—guarantees the people of this state the right to vote under fair, nondiscriminatory maps for the 2020 elections.

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#### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a copy of the foregoing *by email*, addressed to the following persons at the following addresses which are the last addresses known to me:

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This the 8th day of July, 2019.

/s/ Edwin M. Speas
Edwin M. Speas, Jr.

# EXHIBIT A

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 1         | Expert Report of Jowei Chen, Ph.D.  |                              |           |
| 2         | Jowei Chen, Ph.D Curriculum Vitae   |                              |           |
| 3         | County Groupings Used for the 2017 House Plan and All Computer-<br>Simulated House Plans<br>[Chen Report Table 1]   |                              |           |
| 4         | County Groupings Used for the 2017 Senate Plan and All Computer-<br>Simulated Senate Plans<br>[Chen Report Table 2]   |                              |           |
| 5         | The Calculation of District-Level Partisanship Using the 2010-2016<br>Statewide Election Composite<br>[Chen Report Table 3]   |                              |           |
| 6         | Calculating the Partisanship of Districts Originally Drawn in 2011. Using the 2004-2010 Statewide Election Composite [Chen Report Table 4]  |                              |           |
| 7         | Summary of the Enacted 2017 House Plan and House Simulation<br>Sets 1 and 2<br>[Chen Report Table 5]  |                              |           |
| 8         | Example of a Computer-Simulated House Map from House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria) [Chen Report Figure 1]   |                              |           |
| 9         | House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Democratic-Favoring Districts in 2017 House Plan Versus 1,000 Simulated Plans (Measured Using 2010-2016 Election Composite) [Chen Report Figure 2] |                              |           |
| 10        | Number of Democratic Districts Under Alternative Uniform Swings in House Simulation Set 1 Plans [Chen Report Figure U1]   |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 11        | Number of Democratic House Districts Measured Using the 2010-2016 Election Composite with a +4.5% Uniform Swing, Corresponding to a 52.42% Statewide Democratic Vote Share (House Simulation Set 1) [Chen Report Figure U2] |                              |           |
| 12        | Number of Democratic House Districts Measured Using the 2010-2016 Election Composite with a +5% Uniform Swing, Corresponding to a 52.92% Statewide Democratic Vote Share (House Simulation Set 1) [Chen Report Figure U3]   |                              |           |
| 13        | House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Comparison of 2017 House Plan to 1,000 Simulated Plans on Compactness and Mean-Median Difference [Chen Report Figure 3]                        |                              |           |
| 14        | House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Comparison of 2017 House Plan Versus 1,000 Simulated Plans on Compactness [Chen Report Figure 4]   |                              |           |
| 15        | House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Split Municipalities in 2017 House Plan Versus 1,000 Simulated Plans [Chen Report Figure 5]  |                              |           |
| 16        | House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Split VTDs in 2017 House Plan Versus 1,000 Simulated Plans [Chen Report Figure 6]  |                              |           |
| 17        | Example of a Computer-Simulated House Map from House Simulation Set 2 (Following Only Non-Partisan Redistricting Criteria and Avoiding Incumbent Pairings) [Chen Report Figure 7]   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 18        | House Simulation Set 2 (Following Non-Partisan Redistricting Criteria and Avoiding Incumbent Pairings): Democratic-Favoring Districts in 2017 House Plan Versus 1,000 Simulated Plans (Measured Using 2010-2016 Election Composite) [Chen Report Figure 8] |                              |           |
| 19        | House Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Avoiding Incumbent Pairings): Comparison of 2017<br>House Plan to 1,000 Simulated Plans on Compactness and Mean-<br>Media Difference<br>[Chen Report Figure 9]                |                              |           |
| 20        | House Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Avoiding Incumbent Pairings): Comparison of 2017<br>House Plan to 1,000 Simulated Plans on Compactness<br>[Chen Report Figure 10]   |                              |           |
| 21        | House Simulation Set 2 (Following Non-Partisan Redistricting Criteria and Avoiding Incumbent Pairings): Split Municipalities in 2017 House Plan Versus 1,000 Simulated Plans [Chen Report Figure 11]   |                              |           |
| 22        | House Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Avoiding Incumbent Pairings): Split VTDs in 2017<br>House Plan Versus 1,000 Simulated Plans<br>Chen Report Figure 12]   |                              |           |
| 23        | Number of Democratic Districts Under Alternative Uniform Swings in House Simulation Set 2 Plans [Chen Report Figure U4]  |                              |           |
| 24        | Number of Democratic House Districts Measured Using the 2010-2016 Election Composite with 5% Uniform Swing, Corresponding to a 52.92% Statewide Democratic Vote Share [Chen Report Figure U5]  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 25        | Number of Democratic House Districts Measured Using the 2010-2016 Election Composite [Chen Report Figure U6]   |                              |           |
| 26        | Summary of the Enacted 2017 Senate Plan and Senate Simulation<br>Sets 1 and 2<br>[Chen Report Table 6]   |                              |           |
| 27        | Example of a Computer-Simulated Senate Map From Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria) [Chen Report Figure 13]   |                              |           |
| 28        | Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Democratic-Favoring Districts in 2017 Senate Plan Versus 1,000 Simulated Plans (Measured Using 2010-2016 Election Composite) [Chen Report Figure 14] |                              |           |
| 29        | Number of Democratic Districts Under Alternative Uniform Swings in Senate Simulation Set 1 Plans [Chen Report Figure U7]   |                              |           |
| 30        | Number of Democratic Senate Districts Measured Using the 2010-2016 Election Composite With a +4% Uniform Swing, Corresponding to a 51.92% Statewide Democratic Vote Share (Senate Simulation Set 1) [Chen Report Figure U8]        |                              |           |
| 31        | Number of Democratic Senate Districts Measured Using the 2010-2016 Election Composite With a +4.5% Uniform Swing, Corresponding to a 52.42% Statewide Democratic Vote Share (Senate Simulation Set 1) [Chen Report Figure U9]      |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 32        | Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Comparison of 2017 Senate Plan to 1,000 Simulated Plans on Compactness and Mean-Median Difference [Chen Report Figure 15]   |                              |           |
| 33        | Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Comparison of 2017 Senate Plan Versus 1,000 Simulated Plans on Compactness [Chen Report Figure 16]  |                              |           |
| 34        | Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Split Municipalities in 2017 Senate Plan Versus 1,000 Simulated Plans [Chen Report Figure 17]   |                              |           |
| 35        | Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Split VTDs in 2017 Senate Plan Versus 1,000 Simulated Plans [Chen Report Figure 18]   |                              |           |
| 36        | Example of a Computer-Simulated Senate Map From Senate Simulation Set 2 (Following Non-Partisan Redistricting Criteria and Protecting Incumbents) [Chen Report Figure 19]   |                              |           |
| 37        | Senate Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Protecting Incumbents): Democratic-Favoring Districts<br>in Enacted Senate Plan Versus 1,000 Simulated Plans<br>(Measured Using 2010-2016 Election Composite<br>[Chen Report Figure 20] |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 38        | Senate Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Protecting Incumbents): Comparison of 2017 Senate<br>Plan Versus 1,000 Simulated Plans on Compactness and Mean-<br>Median Difference<br>[Chen Report Figure 21] |                              |           |
| 39        | Senate Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Protecting Incumbents): Comparison of Enacted Plan<br>Versus 1,000 Simulated Plans on Compactness<br>[Chen Report Figure 22]                                    |                              |           |
| 40        | Senate Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Protecting Incumbents): Split Municipalities in Enacted<br>Plan Versus 1,000 Simulated Plans<br>[Chen Report Figure 23]   |                              |           |
| 41        | Senate Simulation Set 2 (Following Non-Partisan Redistricting<br>Criteria and Protecting Incumbents): Split VTDs in Enacted Plan<br>Versus 1,000 Simulated Plans<br>[Chen Report Figure 24]   |                              |           |
| 42        | Number of Democratic Districts Under Alternative Uniform Swings in Senate Simulation Set 2 Plans [Chen Report Figure U10]   |                              |           |
| 43        | Number of Democratic Senate Districts Measured Using the 2010-2016 Election Composite With a +4% Uniform Swing, Corresponding to a 51.92% Statewide Democratic Vote Share (Senate Simulation Set 2) [Chen Report Figure U11]                  |                              |           |
| 44        | Number of Democratic Senate Districts Measured Using the 2010-2016 Election Composite With a +4.5% Uniform Swing, Corresponding to a 52.42% Statewide Democratic Vote Share (Senate Simulation Set 2) [Chen Report Figure U12]                |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 45        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Report Figure 25]  |                              |           |
| 46        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cabarrus-Davie-Montgomery-Richmond-Rowan-Stanly County Grouping [Chen Report Figure 26] |                              |           |
| 47        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Report Figure 27]                         |                              |           |
| 48        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Report Figure 28]                                      |                              |           |
| 49        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Report Figure 29]                                  |                              |           |
| 50        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Report Figure 30]                                   |                              |           |
| 51        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Report Figure 31]                   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 52        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [Chen Report Figure 32]           |                              |           |
| 53        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Mecklenburg County Grouping [Chen Report Figure 33]           |                              |           |
| 54        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Wake County Grouping [Chen Report Figure 34]                  |                              |           |
| 55        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance County Grouping [Chen Report Figure 35]              |                              |           |
| 56        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Anson-Union County Grouping [Chen Report Figure 36]           |                              |           |
| 57        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Brunswick-New Hanover County Grouping [Chen Report Figure 37] |                              |           |
| 58        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Buncombe County Grouping [Chen Report Figure 38]              |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 59        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cleveland-Gaston County Grouping [Chen Report Figure 39]              |                              |           |
| 60        | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Duplin-Onslow County Grouping [Chen Report Figure 40]                 |                              |           |
| 61        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Report Figure 41]                      |                              |           |
| 62        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Wake County Grouping [Chen Report Figure 42]                          |                              |           |
| 63        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Mecklenburg County Grouping [Chen Report Figure 43]                   |                              |           |
| 64        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [Chen Report Figure 44]                   |                              |           |
| 65        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Report Figure 45] |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 66        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Report Figure 46]                                   |                              |           |
| 67        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Report Figure 47]                                  |                              |           |
| 68        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Report Figure 48]                                      |                              |           |
| 69        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robson County Grouping [Chen Report Figure 49]                          |                              |           |
| 70        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cabarrus-Davis-Montgomery-Richmond-Rowan-Stanly County Grouping [Chen Report Figure 50] |                              |           |
| 71        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Duplin-Onslow County Grouping [Chen Report Figure 51]                                   |                              |           |
| 72        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cleveland-Gaston County Grouping [Chen Report Figure 52]                                |                              |           |
| 73        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Buncombe County Grouping [Chen Report Figure 53]  |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 74        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Brunswick-New Hanover County Grouping [Chen Report Figure 54]                |                              |           |
| 75        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Anson-Union County Grouping [Chen Report Figure 55]                          |                              |           |
| 76        | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance County Grouping [Chen Report Figure 56]                             |                              |           |
| 77        | Number of House Districts With At Least HD-66's Republican Vote<br>Share 54.44% in the Cabarrus-Davie-Montgomery-Richmond-<br>Rowan-Stanly County Grouping<br>[Chen Report Figure 57] |                              |           |
| 78        | Number of House Districts With At Least HD-83's Republican Vote Share 59.31% in the Cabarrus-Davie-Montgomery-Richmond-Rowan-Stanly County Grouping [Chen Report Figure 58]           |                              |           |
| 79        | Number of House Districts With At Least HD-46's Republican Vote<br>Share 55.56% in the Columbus-Pender-Robeson County Grouping<br>[Chen Report Figure 59]                             |                              |           |
| 80        | Number of House Districts With At Least HD-45's Republican Vote<br>Share 58.08% in the Cumberland County Grouping<br>[Chen Report Figure 60]  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 81        | Number of House Districts With At Least HD-75's Republican Vote Share of 58.74% in the Forsyth-Yadkin County Grouping [Chen Report Figure 61]                        | (if apprendict)              |           |
| 82        | Number of House Districts With At Least HD-7's Republican Vote Share of 56.75% in the Franklin-Nash County Grouping [Chen Report Figure 62]                          |                              |           |
| 83        | Number of House Districts With At Least HD-2's Republican Vote<br>Share of 56.12% in the Granville-Person-Vance-Warren County<br>Grouping<br>[Chen Report Figure 63] |                              |           |
| 84        | Number of House Districts With At Least HD-59's Republican Vote<br>Share of 59.59% in the Guilford County Grouping<br>[Chen Report Figure 64]                        |                              |           |
| 85        | Number of House Districts With At Least HD-12's Republican Vote Share of 51.73% in the Lenoir-Pitt County Grouping [Chen Report Figure 65]                           |                              |           |
| 86        | Number of House Districts With At Least HD-104's Republican Vote Share of 57.75% in the Mecklenburg County Grouping [Chen Report Figure 66]                          |                              |           |
| 87        | Number of House Districts With At Least HD-40's Republican Vote<br>Share of 54.54% in the Wake County Grouping<br>[Chen Report Figure 67]                            |                              |           |
| 88        | Number of House Districts With At Least HD-63's Republican Vote<br>Share of 51.48% in the Alamance County Grouping<br>[Chen Report Figure 68]                        |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 89        | Number of House Districts With At Least HD-55's Republican Vote<br>Share of 55.02% in the Anson-Union County Grouping<br>[Chen Report Figure 69]                             |                              |           |
| 90        | Number of House Districts With At Least HD-19's Republican Vote<br>Share of 56.26% in the Brunswick-New Hanover County Grouping<br>[Chen Report Figure 70]                   |                              |           |
| 91        | Number of House Districts With At Least HD-116's Republican Vote Share of 53.52% in the Buncombe County Grouping [Chen Report Figure 71]                                     |                              |           |
| 92        | Number of House Districts With At Least HD-111's Republican Vote Share of 55.44% in the Cleveland-Gaston County Grouping [Chen Report Figure 72]                             |                              |           |
| 93        | Number of House Districts With At Least HD-4's Republican Vote Share of 50.09% in the Duplin-Onslow County Grouping [Chen Report Figure 73]                                  |                              |           |
| 94        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Report Figure 74] |                              |           |
| 95        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Davie-Forsyth County Grouping [Chen Report Figure 75]              |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 96        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Duplin-Harnett-Johnston-Lee-Nash-Sampson County Grouping [Chen Report Figure 76] |                              |           |
| 97        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Wake County Grouping [Chen Report Figure 77]                            |                              |           |
| 98        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Mecklenburg County Grouping [Chen Report Figure 78]                              |                              |           |
| 99        | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Buncombe-Henderson-Transylvania County Grouping [Chen Report Figure 79]          |                              |           |
| 100       | Senate Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Bladen-Brunswick-New Hanover-Pender County Grouping [Chen Report Figure 80]      |                              |           |
| 101       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Report Figure 81]               |                              |           |
| 102       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Davie-Forsyth County Grouping [Chen Report Figure 82]                            |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 103       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Duplin-Harnett-Johnston-Lee-Nash-Sampson County Grouping [Chen Report Figure 83] |                              |           |
| 104       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Wake County Grouping [Chen Report Figure 84]                            |                              |           |
| 105       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Mecklenburg County Grouping [Chen Report Figure 85]                              |                              |           |
| 106       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Buncombe-Henderson-Transylvania County Grouping [Chen Report Figure 86]          |                              |           |
| 107       | Senate Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Bladen-Brunswick-New Hanover-Pender County Grouping [Chen Report Figure 87]      |                              |           |
| 108       | Number of Senate Districts With At Least SD-27's Republican Vote Share of 55.38% in the Alamance-Guilford-Randolph County Grouping [Chen Report Figure 88]                                 |                              |           |
| 109       | Number of Senate Districts With At Least SD-31's Republican Vote Share of 65.41% in the Davie-Forsyth County Grouping [Chen Report Figure 89]  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 110       | Number of Senate Districts With At Least SD-11's Republican Vote<br>Share of 57.3% in the Duplin-Harnett-Johnston-Lee-Nash-Sampson<br>County Grouping<br>[Chen Report Figure 90] |                              |           |
| 111       | Number of Senate Districts With At Least SD-17's Republican Vote Share of 55.55% in the Franklin-Wake County Grouping [Chen Report Figure 91]                                    |                              |           |
| 112       | Number of Senate Districts With At Least SD-41's Republican Vote Share of 52.43% in the Mecklenburg County Grouping [Chen Report Figure 92]                                      |                              |           |
| 113       | Number of Senate Districts With At Least SD-8's Republican Vote<br>Share of 50.11% in the Bladen-Brunswick-New Hanover-Pender<br>County Grouping<br>[Chen Report Figure 93]      |                              |           |
| 114       | Number of Senate Districts With At Least SD-48's Republican Vote<br>Share of 57.21% in the Buncombe-Henderson-Transylvania County<br>Grouping<br>[Chen Report Figure 94]         |                              |           |
| 115       | Plaintiffs: House Simulation Set 1 [Chen Report Figure 95]   |                              |           |
| 116       | Plaintiffs: House Simulation Set 2 [Chen Report Figure 96]   |                              |           |
| 117       | Plaintiffs: Senate Simulation Set 1 [Chen Report Figure 97]  |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 118       | Plaintiffs: Senate Simulation Set 2 [Chen Report Figure 98]   |                              |           |
| 119       | Appendix A: House Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Democratic-Favoring Districts in 2017 House Plan Versus 1,000 Simulated Plans (Measured Using 2016 Attorney General Election) [Chen Report Figure A1]                              |                              |           |
| 120       | Appendix A: House Simulation Set 2 (Following Non-Partisan Redistricting Criteria and Avoiding Incumbent Pairings): Democratic-Favoring Districts in 2017 House Plan Versus 1,000 Simulated Plans (Measured Using 2016 Attorney General Election) [Chen Report Figure A2]   |                              |           |
| 121       | Appendix A: Senate Simulation Set 1 (Following Only Non-Partisan Redistricting Criteria): Democratic-Favoring Districts in 2017 Senate Plan Versus 1,000 Simulated Plans (Measured Using 2016 Attorney General Election) [Chen Report Figure A3]                            |                              |           |
| 122       | Appendix A: Senate Simulation Set 2 (Following Non-Partisan Redistricting Criteria and Avoiding Incumbent Pairings): Democratic-Favoring Districts in 2017 Senate Plan Versus 1,000 Simulated Plans (Measured Using 2016 Attorney General Election) [Chen Report Figure A4] |                              |           |
| 123       | [CORRECTED] Response Report of Jowei Chen, Ph.D.  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 124       | Mecklenburg County Grouping [Chen Rebuttal Report Figure 1]  |                              |           |
| 125       | Alexander-Alleghany-Rockingham-Stokes-Surry-Wilkes County<br>Grouping<br>[Chen Rebuttal Report Figure 2] |                              |           |
| 126       | Bladen-Greene-Harnett-Johnston-Lee-Sampson-Wayne County<br>Grouping<br>[Chen Rebuttal Report Figure 3]   |                              |           |
| 127       | Caswell-Orange County Grouping [Chen Rebuttal Report Figure 4]   |                              |           |
| 128       | Chatham-Durham County Grouping [Chen Rebuttal Report Figure 5]   |                              |           |
| 129       | Columbia-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 6]                                  |                              |           |
| 130       | Duplin-Onslow County Grouping [Chen Rebuttal Report Figure 7]  |                              |           |
| 131       | Forsyth-Yadkin County Grouping [Chen Rebuttal Report Figure 8]   |                              |           |
| 132       | Granville-Person-Vance-Warren County Grouping [Chen Rebuttal Report Figure 9]                            |                              |           |
| 133       | Lenoir-Pitt County Grouping [Chen Rebuttal Report Figure 10]   |                              |           |
| 134       | Beaufort-Craven County Grouping [Chen Rebuttal Report Figure 11]   |                              |           |
| 135       | Cabarrus-Davis-Montgomery-Richmond-Rowan-Stanly County<br>Grouping<br>[Chen Rebuttal Report Figure 12]   |                              |           |
| 136       | Cumberland County Grouping [Chen Rebuttal Report Figure 13]  |                              |           |
| 137       | Franklin-Nash County Grouping [Chen Rebuttal Report Figure 14]   |                              |           |
| 138       | Guilford County Grouping [Chen Rebuttal Report Figure 15]  |                              |           |
| 139       | Wake County Grouping [Chen Rebuttal Report Figure 16]  |                              |           |
| 140       | Alamance-Guilford-Randolph County Grouping [Chen Rebuttal Report Figure 17]                              |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 141       | Alleghany-Ashe-Caswell-Rockingham-Stokes-Surry-Watauga-Wilkes County Grouping [Chen Rebuttal Report Figure 18]  |                              |           |
| 142       | Cumberland-Hoke County Grouping [Chen Rebuttal Report Figure 19]  |                              |           |
| 143       | Davie-Forsyth County Grouping [Chen Rebuttal Report Figure 20]  |                              |           |
| 144       | Duplin-Harnett-Johnston-Lee-Nash-Sampson County Grouping [Chen Rebuttal Report Figure 21]   |                              |           |
| 145       | Durham- Granville-Person County Grouping [Chen Rebuttal Report Figure 22]   |                              |           |
| 146       | Franklin-Wake County Grouping [Chen Rebuttal Report Figure 23]  |                              |           |
| 147       | Mecklenburg County Grouping [Chen Rebuttal Report Figure 24]  |                              |           |
| 148       | Screenshot of Dataview Window For Dr. Hofeller's "NC House J-25003.bak.zip" [Chen Rebuttal Report Figure 25]  |                              |           |
| 149       | Screenshot of Dataview Window For Dr. Hofeller's "NC House J-25003.bak.zip" Draft Plan [Chen Rebuttal Report Figure 26]   |                              |           |
| 150       | Screenshot of "Formula" Window and District Labels for Dr. Hofeller's "NC House J-25003.bak.zip" Draft Plan (August 14, 2017) [Chen Rebuttal Report Figure 27]            |                              |           |
| 151       | Screenshot of District Labels Reporting Racial Characteristics of Dr. Hofeller's "NC House J-25003.bak.zip" Draft Plan (August 14, 2017) [Chen Rebuttal Report Figure 28] |                              |           |
| 152       | Screenshot of Dataview Window for Dr. Hofeller's "NC Senate J-23005.bak.zip" Draft Plan (August 13, 2017) [Chen Rebuttal Report Figure 29]                                |                              |           |
| 153       | Dr. Hofeller's "FORMULA FOR POLITICAL ANALYSIS OF LEGISLATIVE DISTRICTS.doc" [Chen Rebuttal Report Figure 30]   |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 154       | Screenshot of Dr. Hofeller's Draft Plan File: "NC House Plan June 7.xls" [Chen Rebuttal Report Figure 31]   |                              |           |
| 155       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members D.xlsx" (December 6, 2016) [Chen Rebuttal Report Figure 32]                             |                              |           |
| 156       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members D.xlsx" (December 3, 2016) [Chen Rebuttal Report Figure 33]                             |                              |           |
| 157       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members D.xlsx" (June 12, 2017) [Chen Rebuttal Report Figure 36]                                |                              |           |
| 158       | Dr. Hofeller's Draft Plan File: "NC Senate Minimum Partisan J-2" (June 13, 2017) [Chen Rebuttal Report Figure 39]                                       |                              |           |
| 159       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members J-2.xlsx"(June 14, 2017) [Chen Rebuttal Report Figure 40]                               |                              |           |
| 160       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members J-2.xlsx"(June 14, 2017) [Chen Rebuttal Report Figure 41]                               |                              |           |
| 161       | Dr. Hofeller's Draft Plan File: "NC Senate Minimum-Partisan J-2.xlsx"(June 13, 2017) [Chen Rebuttal Report Figure 42]                                   |                              |           |
| 162       | Dr. Hofeller's Draft Plan File: "Senate Minimum-Partisan-<br>Members.xlsx"(November 26, 2016)<br>[Chen Rebuttal Report Figure 43]                       |                              |           |
| 163       | Dr. Hofeller's Draft Plan File: "Senate Minimum-Partisan-Members J-2.xlsx"(July 13, 2017) [Chen Rebuttal Report Figure 44]                              |                              |           |
| 164       | Dr. Hofeller's Draft Plan File: "PPI Indicator Votes for New 2017<br>Legislative Districts.xlsx"<br>(June 24, 2017)<br>[Chen Rebuttal Report Figure 45] |                              |           |
| 165       | Dr. Hofeller's Draft Plan File: "House Minimum Renumbered.xls" (December 3, 2016) [Chen Rebuttal Report Figure 45b]                                     |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 166       | Dr. Hofeller's Draft Plan File: "Johnston Senate Switch.xlsx" (December 11, 2016) [Chen Rebuttal Report Figure 46]   |                              |           |
| 167       | Dr. Hofeller's Draft Plan File: "NC Senate CCNC Sample Plan - June 2017.xlsx" (July 8, 2017) [Chen Rebuttal Report Figure 47]  |                              |           |
| 168       | Screenshot (Upper Half) of Dr. Hofeller's Draft Plan File: "NC Senate CCNC PPI" (July 8, 2017) [Chen Rebuttal Report Figure 48a]   |                              |           |
| 169       | Screenshot (Lower Half) of Dr. Hofeller's Draft Plan File: "NC Senate CCNC PPI" (July 8, 2017) [Chen Rebuttal Report Figure 48b]   |                              |           |
| 170       | Dr. Hofeller's Draft Plan File: "NC House CCNC Sample Plan - June 2017.xlsx" (July 5, 2017) [Chen Rebuttal Report Figure 49]   |                              |           |
| 171       | African American Population of 2017 House Plan Districts [Chen Rebuttal Report Table 3]  |                              |           |
| 172       | African American Population of 2017 Senate Plan Districts [Chen Rebuttal Report Table 4]   |                              |           |
| 173       | House Computer-Simulated Districts Achieving Dr. Lewis' Estimated Black CVAP Thresholds [Chen Rebuttal Report Table 5]   |                              |           |
| 174       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 101] |                              |           |
| 175       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 102] |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 176       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 103]                    |                              |           |
| 177       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 104]                    |                              |           |
| 178       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 105]                    |                              |           |
| 179       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Rebuttal Report Figure 106]                |                              |           |
| 180       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Rebuttal Report Figure 107]                |                              |           |
| 181       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Rebuttal Report Figure 108]                 |                              |           |
| 182       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Rebuttal Report Figure 109]                 |                              |           |
| 183       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Rebuttal Report Figure 110] |                              |           |
| 184       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Rebuttal Report Figure 111] |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 185       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 112]    |                              |           |
| 186       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 113]    |                              |           |
| 187       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 114]    |                              |           |
| 188       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 115]    |                              |           |
| 189       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 116]    |                              |           |
| 190       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 117]    |                              |           |
| 191       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 118]    |                              |           |
| 192       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [Chen Rebuttal Report Figure 119] |                              |           |
| 193       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [Chen Rebuttal Report Figure 120] |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 194       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 123] |                              |           |
| 195       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 124] |                              |           |
| 196       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 125]              |                              |           |
| 197       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 126]              |                              |           |
| 198       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Cumberland County Grouping [Chen Rebuttal Report Figure 127]              |                              |           |
| 199       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Rebuttal Report Figure 128]          |                              |           |
| 200       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Forsyth-Yadkin County Grouping [Chen Rebuttal Report Figure 129]          |                              |           |
| 201       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Rebuttal Report Figure 130]           |                              |           |
| 202       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Franklin-Nash County Grouping [Chen Rebuttal Report Figure 131]           |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 203       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Rebuttal Report Figure 132] |                              |           |
| 204       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Granville-Person-Vance-Warren County Grouping [Chen Rebuttal Report Figure 133] |                              |           |
| 205       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 134]                      |                              |           |
| 206       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 135]                      |                              |           |
| 207       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 136]                      |                              |           |
| 208       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 137]                      |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 209       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 138]                   |                              |           |
| 210       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 139]                   |                              |           |
| 211       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Guilford County Grouping [Chen Rebuttal Report Figure 140]                   |                              |           |
| 212       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [Chen Rebuttal Report Figure 141]                |                              |           |
| 213       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Lenoir-Pitt County Grouping [[Chen Rebuttal Report Figure 142]               |                              |           |
| 214       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Rebuttal Report Figure 145] |                              |           |
| 215       | House Simulation Set 1: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Rebuttal Report Figure 146] |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 216       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Rebuttal Report Figure 147]   |                              |           |
| 217       | House Simulation Set 2: Democratic Vote Share of the Enacted and Computer-Simulated Districts Within the Alamance-Guilford-Randolph County Grouping [Chen Rebuttal Report Figure 148]   |                              |           |
| 218       | Senate Computer-Simulated Districts Achieving Dr. Lewis' Estimated Black CVAP Thresholds [Chen Rebuttal Report Table 6]   |                              |           |
| 219       | Comparison of 2017 House Plan and House Simulation Set 1 and Set 2 On Number of Districts with Dr. Lewis' Black CVAP thresholds in Individual Counties [Chen Rebuttal Report Table 7]   |                              |           |
| 220       | Comparison of 2017 Senate Plan and Senate Simulation Set 1 and Set 2 On Number of Districts with Dr. Lewis' Black CVAP thresholds in Individual Counties [Chen Rebuttal Report Table 8] |                              |           |
| 221       | 10,000 Computer-Simulated House Plans for the Franklin-Nash<br>County Grouping<br>[Chen Rebuttal Report Figure 149]   |                              |           |
| 222       | The Computer-Simulated House Plan for the Franklin-Nash County<br>Grouping<br>[Chen Rebuttal Report Figure 150]   |                              |           |
| 223       | Senate District Boundaries for the Davie-Forsyth County Grouping<br>With the Highest Possible Black Voting Age Population<br>[Chen Rebuttal Report Figure 151]                          |                              |           |
| 224       | House Simulation Set 1: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Alamance County Grouping<br>[Chen Rebuttal Report Figure 152]                             |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 225       | House Simulation Set 1: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Anson-Union County Grouping<br>[Chen Rebuttal Report Figure 153]                |                              |           |
| 226       | House Simulation Set 1: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Cleveland-Gaston County Grouping<br>[Chen Rebuttal Report Figure 154]           |                              |           |
| 227       | House Simulation Set 1: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Columbus-Pender-Robeson County<br>Grouping<br>[Chen Rebuttal Report Figure 155] |                              |           |
| 228       | House Simulation Set 1: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Duplin-Onslow County Grouping<br>[Chen Rebuttal Report Figure 156]              |                              |           |
| 229       | House Simulation Set 2: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Alamance County Grouping<br>[Chen Rebuttal Report Figure 157]                   |                              |           |
| 230       | House Simulation Set 2: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Anson-Union County Grouping<br>[Chen Rebuttal Report Figure 158]                |                              |           |
| 231       | House Simulation Set 2: Black CVAP of the Enacted Computer-<br>Simulated Districts Within the Cleveland-Gaston County Grouping<br>[Chen Rebuttal Report Figure 159]           |                              |           |
| 232       | House Simulation Set 2: Black CVAP of the Enacted Computer-Simulated Districts Within the Columbus-Pender-Robeson County Grouping [Chen Rebuttal Report Figure 160]           |                              |           |
| 233       | House Simulation Set 2: Black CVAP of the Enacted Computer-Simulated Districts Within the Duplin-Onslow County Grouping [Chen Rebuttal Report Figure 161]                     |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 234       | Actual Distribution of Democratic-Favoring Districts Across 1,000 Simulated Plans in House Simulation Set 1 vs. Binomial Distribution Created by Dr. Thornton [Chen Rebuttal Report Figure 50]           |                              |           |
| 235       | Actual Distribution of Democratic-Favoring Districts Across 1,000 Simulated Plans in House Simulation Set 2 vs. Binomial Distribution Created by Dr. Thornton [Chen Rebuttal Report Figure 51]           |                              |           |
| 236       | Actual Distribution of Democratic-Favoring Districts Across 1,000 Simulated Plans in Senate Simulation Set 1 vs. Binomial Distribution Created by Dr. Thornton [Chen Rebuttal Report Figure 52]          |                              |           |
| 237       | Actual Distribution of Democratic-Favoring Districts Across 1,000<br>Simulated Plans in Senate Simulation Set 2 vs. Binomial<br>Distribution Created by Dr. Thornton<br>[Chen Rebuttal Report Figure 53] |                              |           |
| 238       | Plaintiffs: House Simulation Set 1 [Chen Rebuttal Report Figure 54]  |                              |           |
| 239       | Plaintiffs: House Simulation Set 2 [Chen Rebuttal Report Figure 55]  |                              |           |
| 240       | Dr. Hofeller's Draft Plan File: "NC House Plan June7.xls"  |                              |           |
| 241       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members D.xlsx" (December 6, 2016)   |                              |           |
| 242       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members.xlsx" (December 3, 2016)   |                              |           |
| 243       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members D.xlsx" (June 12, 2017)  |                              |           |
| 244       | Dr. Hofeller's Draft Plan File: "NC Senate Minimum Partisan J-2" (June 13, 2017)   |                              |           |
| 245       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members J-2.xlsx" (June 14, 2017)  |                              |           |
| 246       | Dr. Hofeller's Draft Plan File: "House Minimum-Partisan-Members J-2.xlsx" (June 14, 2017)  |                              |           |
|           |  |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 247       | Dr. Hofeller's Draft Plan File: "NC Senate Minimum-Partisan J-2.xlsx" (June 13, 2017)           |                              |           |
| 248       | Dr. Hofeller's Draft Plan File: "Senate Minimum-Partisan-<br>Members.xlsx" (November 26,2016)   |                              |           |
| 249       | Dr. Hofeller's Draft Plan File: "Senate Minimum-Partisan-Member J-2.xlsx" (June 13, 2017)       |                              |           |
| 250       | Dr. Hofeller's Draft Plan File: "House Minimum Renumbered.xls" (December 3, 2016)               |                              |           |
| 251       | Dr. Hofeller's Draft Plan File: "NC Senate CCNC Sample Plan - June 2017.xlsx" (July 8, 2017)    |                              |           |
| 252       | Dr. Hofeller's Draft Plan File: "NC House CCNC Sample Plan - June 2017.xlsx" (July 5, 2017)     |                              |           |
| 253       | Expert Report of Christopher Cooper   |                              |           |
| 254       | Christopher Cooper- Curriculum Vitae  |                              |           |
| 255       | NC Rank in Presidential Vote Share Among 50 States [Cooper Report Figure 1]                     |                              |           |
| 256       | NC Council of State Electoral Results 2004-2016<br>[Cooper Report Figure 2]                     |                              |           |
| 257       | Percent of Republican Two-Party Vote Share in NCGA Elections 2012-2018 [Cooper Report Figure 3] |                              |           |
| 258       | 2016 Citizen Political Ideology by State<br>[Cooper Report Figure 4]                            |                              |           |
| 259       | Percentage of Seats Held by Democrats in the NCGA 2001-2018 [Cooper Report Figure 5]            |                              |           |
| 260       | Average Member Ideology in the NCGA 2000-2016 [Cooper Report Figure 6]                          |                              |           |
| 261       | 2016 State Legislative Ideology by State<br>[Cooper Report Figure 7]                            |                              |           |
| 262       | NC State Senate Election Margins 2018 [Cooper Report Figure 8]                                  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 263       | NC State House Election Margins 2018<br>[Cooper Report Figure 9]                                   |                              |           |
| 264       | Percent of Democratic Votes and Seats in the NC General Assembly 2012-2018 [Cooper Report Table 1] |                              |           |
| 265       | Distribution of Senate CPI Scores<br>[Cooper Report Figure 10]                                     |                              |           |
| 266       | Distribution of House CPI Scores<br>[Cooper Report Figure 11]                                      |                              |           |
| 267       | NCFEF Senate Ratings [Cooper Report Figure 12]   |                              |           |
| 268       | NCFEF House Ratings [Cooper Report Figure 13]  |                              |           |
| 269       | NC Senate Distribution of Civitas Action Scores 2018 [Cooper Report Figure 14]                     |                              |           |
| 270       | NC House Distribution of Civitas Action Scores 2018 [Cooper Report Figure 15]                      |                              |           |
| 271       | Legend for Area Maps [Cooper Report Map 1]   |                              |           |
| 272       | Senate Districts 8 and 9 [Cooper Report Map 2]   |                              |           |
| 273       | Wilmington Notch [Cooper Report Map 3]   |                              |           |
| 274       | Senate Districts 10, 11 and 12<br>[Cooper Report Map 4]  |                              |           |
| 275       | Senate District 11 Country Clubs [Cooper Report Map 5]   |                              |           |
| 276       | Senate Districts 14, 15, 16, 17, and 18 [Cooper Report Map 6]                                      |                              |           |
| 277       | Municipalities in Senate Districts 14, 15, 16, 17, and 18 [Cooper Report Map 7]                    |                              |           |
| 278       | Portions of Raleigh City Limits in Senate Districts 14, 15, 16, 17 and 18 [Cooper Report Map 8]    |                              |           |
| 279       | Lynn Road Traversal in Senate Districts 14, 15, 16, and 18 [Cooper Report Map 9]                   |                              |           |
| 280       | Country Clubs in Senate Districts 14, 15, 16, and 18 [Cooper Report Map 10]                        |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 281       | Senate Districts 24, 26, 27, and 28<br>[Cooper Report Map 11]                                       |                              |           |
| 282       | Senate Districts 31 and 32<br>[Cooper Report Map 12]  |                              |           |
| 283       | Portions of Winston-Salem City Limits in Senate Districts 31 and 32 [Cooper Report Map 13]          |                              |           |
| 284       | Peace Haven Road Traversal in Senate Districts 31 and 32 [Cooper Report Map 14]                     |                              |           |
| 285       | Senate Districts 37, 38, 39, 40, and 41 [Cooper Report Map 15]                                      |                              |           |
| 286       | Portions of Charlotte City Limits in Senate Districts 37, 38, 39, 40, and 41 [Cooper Report Map 16] |                              |           |
| 287       | Arrowood Quarry and Senate Districts 37 and 41 [Cooper Report Map 17]                               |                              |           |
| 288       | Senate Districts 48 and 49 [Cooper Report Map 18]   |                              |           |
| 289       | House Districts 2 and 32<br>[Cooper Report Map 19]  |                              |           |
| 290       | Municipalities in House Districts 2 and 32 [Cooper Report Map 20]                                   |                              |           |
| 291       | House Districts 4, 14, and 15<br>[Cooper Report Map 21]   |                              |           |
| 292       | Municipalities in House Districts 4, 14, and 15 [Cooper Report Map 22]                              |                              |           |
| 293       | House Districts 7 and 25<br>[Cooper Report Map 23]  |                              |           |
| 294       | House Districts 8, 9, and 12<br>[Cooper Report Map 24]  |                              |           |
| 295       | Municipalities in House Districts 8, 9, and 12 [Cooper Report Map 25]                               |                              |           |
| 296       | ECU Bisection in House Districts 8 and 9 [Cooper Report Map 26]                                     |                              |           |
| 297       | House Districts 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 49 [Cooper Report Map 27]               |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 298       | Municipalities in House Districts 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 49 [Cooper Report Map 28]          |                              |           |
| 299       | House Districts Representing Raleigh and Percentage of District<br>Area in City Limits<br>[Cooper Report Map 29] |                              |           |
| 300       | NCSU Campus Divisions in House Districts 11, 33, 34, and 49 [Cooper Report Map 30]                               |                              |           |
| 301       | House Districts 16, 46, and 47<br>[Cooper Report Map 31]   |                              |           |
| 302       | House Districts 17, 18, 19, and 20<br>[Cooper Report Map 32]   |                              |           |
| 303       | Portions of Wilmington City Limits in House Districts 18, 19, and 20 [Cooper Report Map 33]                      |                              |           |
| 304       | UNC Wilmington Divisions in House Districts 18, 19, and 20 [Cooper Report Map 34]                                |                              |           |
| 305       | House Districts 42, 43, 44, and 45<br>[Cooper Report Map 35]   |                              |           |
| 306       | Municipalities in House Districts 42, 43, 44, and 45 [Cooper Report Map 36]                                      |                              |           |
| 307       | House Districts 55, 68, and 69<br>[Cooper Report Map 37]   |                              |           |
| 308       | Municipalities in House Districts 55, 68, and 69 [Cooper Report Map 38]  |                              |           |
| 309       | US Hwy 74 Traversal in House Districts 55, 68, and 69 [Cooper Report Map 39]                                     |                              |           |
| 310       | House Districts 58, 59, and 60<br>[Cooper Report Map 40]   |                              |           |
| 311       | House Districts 63 and 64<br>[Cooper Report Map 41]  |                              |           |
| 312       | Municipalities in House Districts 63 and 64 [Cooper Report Map 42]   |                              |           |
| 313       | US Hwy 70 Traversal in House Districts 63 and 64 [Cooper Report Map 43]  |                              |           |
| 314       | House Districts 66, 67, 76, 77, 82, and 83<br>[Cooper Report Map 44]   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 315       | Municipalities in House Districts 66, 67, 76, 77, 82, and 83 [Cooper Report Map 45]  |                              |           |
| 316       | House Districts 71, 72, 73, 74, and 75 [Cooper Report Map 46]  |                              |           |
| 317       | Municipalities in House Districts 71, 72, 73, 74, and 75 [Cooper Report Map 47]  |                              |           |
| 318       | Portions of Winston-Salem City Limits in House Districts 71, 72, 73, 74, and 75 [Cooper Report Map 48]                             |                              |           |
| 319       | House Districts 88, 92, 98, 99, 100, 101, 102, 103, 104, 105, 106, and 107 [Cooper Report Map 49]                                  |                              |           |
| 320       | Portions of Charlotte City Limits in House Districts 88, 92, 99, 100, 101, 102, 103, 104, 105, 106, and 107 [Cooper Report Map 50] |                              |           |
| 321       | Precincts in House Districts 88, 92, 98, 99, 100, 101, 102, 103, 104, 105, 106, and 107 [Cooper Report Map 51]                     |                              |           |
| 322       | Civitas and NCFEF Ratings for House Districts 88, 92, 98, 99, 100, 101, 102, 103, 104, 105, 106 and 107 [Cooper Report Table 2]    |                              |           |
| 323       | House Districts 108, 109, 110, and 111<br>[Cooper Report Map 52]   |                              |           |
| 324       | Gastonia Division in House Districts 108, 109, and 110 [Cooper Report Map 53]  |                              |           |
| 325       | Municipalities in House Districts 108, 109, 110, and 111 [Cooper Report Map 54]  |                              |           |
| 326       | House Districts 114, 115, and 116<br>[Cooper Report Map 55]  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 327       | Municipalities in House Districts 114, 115, and 116 [Cooper Report Map 56]   |                              |           |
| 328       | Warren Wilson College Bisection in House Districts 114 and 115 [Cooper Report Map 57]                                    |                              |           |
| 329       | Expert Response Report of Christopher Cooper   |                              |           |
| 330       | Partisan Formula Field for 2017 NC Senate Redistricting from Dr. Hofeller's Hard Drive [Cooper Rebuttal Report Figure 1] |                              |           |
| 331       | Example of NC Senate Partisan Targeting from Dr. Hofeller's Hard Drive [Cooper Rebuttal Report Figure 2]                 |                              |           |
| 332       | Partisan Targeting in Senate Districts 10, 11, and 12 [Cooper Rebuttal Report Figure 3]                                  |                              |           |
| 333       | Partisan Targeting in Senate Districts 14, 15, 16, 17, and 18 [Cooper Rebuttal Report Figure 4]                          |                              |           |
| 334       | Partisan Targeting in Senate Districts 24, 26, 27, and 28 [Cooper Rebuttal Report Figure 5]                              |                              |           |
| 335       | Partisan Targeting in Senate Districts 31 and 32 [Cooper Rebuttal Report Figure 6]                                       |                              |           |
| 336       | Partisan Targeting in Senate Districts 37, 38, 39, 40, and 41 [Cooper Rebuttal Report Figure 7]                          |                              |           |
| 337       | Partisan Formula Field for 2017 House Redistricting from Dr. Hofeller's Hard Drive [Cooper Rebuttal Report Figure 8]     |                              |           |
| 338       | Partisan Targeting in House Districts 2 and 32 [Cooper Rebuttal Report Figure 9]   |                              |           |
| 339       | Partisan Targeting in House Districts 4, 14, and 15 [Cooper Rebuttal Report Figure 10]                                   |                              |           |
| 340       | Partisan Targeting in House Districts 8, 9, and 12<br>[Cooper Rebuttal Report Figure 11]                                 |                              |           |
| 341       | Partisan Targeting in House Districts 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 49 [Cooper Rebuttal Report Figure 12]  |                              |           |
| 342       | Partisan Targeting in House Districts 16, 46, and 47 [Cooper Rebuttal Report Figure 13]                                  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 343       | Partisan Targeting in House Districts 42, 43, 44, and 45 [Cooper Rebuttal Report Figure 14]                                    |                              |           |
| 344       | Partisan Targeting in House Districts 58, 59, and 60 [Cooper Rebuttal Report Figure 15]  |                              |           |
| 345       | Partisan Targeting in House Districts 71, 72,73, 74, and 75 [Cooper Rebuttal Report Figure 16]                                 |                              |           |
| 346       | Partisan Targeting in House Districts 88, 92, 98, 99, 101, 102, 103, 104, 105, 106, and 107 [Cooper Rebuttal Report Figure 17] |                              |           |
| 347       | Partisan Formula Field for 2011 NC Senate Redistricting from Dr. Hofeller's Hard Drive [Cooper Rebuttal Report Figure 18]      |                              |           |
| 348       | Partisan Targeting in Senate Districts 8 and 9 [Cooper Rebuttal Report Figure 19]  |                              |           |
| 349       | Partisan Targeting in Senate Districts 48 and 49 [Cooper Rebuttal Report Figure 20]  |                              |           |
| 350       | Partisan Formula Field for July 2011 House Redistricting [Cooper Rebuttal Report Figure 21]                                    |                              |           |
| 351       | Partisan Targeting in House Districts 17, 18, 19, and 20 [Cooper Rebuttal Report Figure 23]                                    |                              |           |
| 352       | Partisan Formula Field for the June 2011 House Maps [Cooper Rebuttal Report Figure 24]   |                              |           |
| 353       | Partisan Targeting in House Districts 55, 68, and 69 [Cooper Rebuttal Report Figure 25]  |                              |           |
| 354       | Partisan Targeting in House Districts 63 and 64 [Cooper Rebuttal Report Figure 26]   |                              |           |
| 355       | Partisan Targeting in House Districts 108, 109, 110 and 111 [Cooper Rebuttal Report Figure 27]                                 |                              |           |
| 356       | Partisan Targeting in House Districts 114, 115, and 116 [Cooper Rebuttal Report Figure 28]                                     |                              |           |
| 357       | Applying Lewis' Three Assumptions to the 2018 NC Senate Elections [Cooper Rebuttal Report Table 1]                             |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 358       | Applying Lewis' Three Assumptions to the 2018 NC House Elections [Cooper Rebuttal Report Table 2]   |                              |           |
| 359       | Expert Report of Jonathan Mattingly   |                              |           |
| 360       | Jonathan Mattingly- Curriculum Vitae  |                              |           |
| 361       | Chance that a certain number of Democrats are elected to the North Carolina Senate using the partisan vote counts from the 2008 Lieutenant Governor.  [Mattingly Report Figure 1] |                              |           |
| 362       | Range of Democratic seats won in the ensemble of plans [Mattingly Report Figure 2]  |                              |           |
| 363       | Median number of elected Democrats over the plans in the Senate ensemble for each considered election.  [Mattingly Report Figure 3]   |                              |           |
| 364       | Range of the 15th least Democratic district to the 35th least democratic district. [Mattingly Report Figure 4]  |                              |           |
| 365       | Range of possible Democratic seats won in the ensemble to plans. [Mattingly Report Figure 5]  |                              |           |
| 366       | Median number of elected Democrats over the plans in the House ensemble for each considered election.  [Mattingly Report Figure 6]  |                              |           |
| 367       | Typical range of the 40th least Democratic district to the 80th least democratic district (Mattingly Report Figure 7)   |                              |           |
| 368       | Collection of histograms in the Senate and House [Mattingly Report Figure 8]  |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 369       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Mecklenburg Cluster (Senate) [Mattingly Report Figure 9]                          |                              |           |
| 370       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Mecklenburg Cluster- Senate] [Mattingly Report Figure 10]                          |                              |           |
| 371       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Wake-Franklin Cluster (Senate) [Mattingly Report Figure 11]                       |                              |           |
| 372       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Wake/Franklin Cluster- Senate] [Mattingly Report Figure 12]                        |                              |           |
| 373       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Davie-Forsyth Cluster (Senate) [Mattingly Report Figure 13]                       |                              |           |
| 374       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Davie-Forsyth Cluster -Senate] [Mattingly Report Figure 14]                        |                              |           |
| 375       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Bladen-Brunswick-Pender-New Hanover Cluster (Senate) [Mattingly Report Figure 15] |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 376       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Bladen-Brunswick-Pender- New Hanover Cluster- Senate] [Mattingly Report Figure 16]      |                              |           |
| 377       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Buncombe-Transylvania-Henderson Cluster (Senate) [Mattingly Report Figure 17]          |                              |           |
| 378       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Buncombe-Transylvania- Henderson Cluster- Senate] [Mattingly Report Figure 18]          |                              |           |
| 379       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Guilford-Alamance-Randolph Cluster (Senate) [Mattingly Report Figure 19]               |                              |           |
| 380       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford-Alamance-Randolph Cluster- Senate] [Mattingly Report Figure 20                 |                              |           |
| 381       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Lee-Sampson-Harnett-Duplin-Johnston-Nash Cluster (Senate) [Mattingly Report Figure 21] |                              |           |
| 382       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Lee-Sampson-Harnett-Duplin-Johnston-Nash Senate] [Mattingly Report Figure 22]           |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 383       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Alamance Cluster (House) [Mattingly Report Figure 23]  |                              |           |
| 384       | Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Alamance Cluster- House]<br>[Mattingly Report Figure 24]                                   |                              |           |
| 385       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Buncombe Cluster (House) [Mattingly Report Figure 25]  |                              |           |
| 386       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Buncombe Cluster- House] [Mattingly Report Figure 26]   |                              |           |
| 387       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Columbia-Pender-Robeson Cluster (House) [Mattingly Report Figure 27]                         |                              |           |
| 388       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Columbus-Pender-Robeson Cluster - House] [Mattingly Report Figure 28]                         |                              |           |
| 389       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Cumberland Cluster (House) [Mattingly Report Figure 29]                                      |                              |           |
| 390       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Cumberland Cluster - House] [Mattingly Report Figure 30]                                      |                              |           |
| 391       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Davie-Montgomery-Richmond-Cabarrus-Rowan-Stanly Cluster (House) (Mattingly Report Figure 31) |                              |           |

| Description  | Bates Number (if applicable)   | Objection   |
|--|--|---|
| Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Davie-Montgomery-Richmond-<br>Cabarrus-Rowan-Stanly Cluster - House]<br>[Mattingly Report Figure 32] |  |   |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Duplin-Onslow Cluster (House) [Mattingly Report Figure 33]   |  |   |
| Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Duplin-Onslow Cluster - House]<br>[Mattingly Report Figure 34]                                       |  |   |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Gaston-Cleveland Cluster (House) [Mattingly Report Figure 35]  |  |   |
| Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Gaston-Cleveland Cluster - House]<br>[Mattingly Report Figure 36]                                    |  |   |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Guilford Cluster (House) [Mattingly Report Figure 37]  |  |   |
| Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] [Mattingly Report Figure 38]  |  |   |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Mecklenburg Cluster (House) [Mattingly Report Figure 39]   |  |   |
| Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] [Mattingly Report Figure 40]  |  |   |
|  | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Davie-Montgomery-Richmond-Cabarrus-Rowan-Stanly Cluster - House] [Mattingly Report Figure 32]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Duplin-Onslow Cluster (House) [Mattingly Report Figure 33]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Duplin-Onslow Cluster - House] [Mattingly Report Figure 34]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Gaston-Cleveland Cluster (House) [Mattingly Report Figure 35]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Gaston-Cleveland Cluster - House] [Mattingly Report Figure 36]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Guilford Cluster (House) [Mattingly Report Figure 37]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] [Mattingly Report Figure 38]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Mecklenburg Cluster (House) [Mattingly Report Figure 39]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Davie-Montgomery-Richmond- Cabarrus-Rowan-Stanly Cluster - House] [Mattingly Report Figure 32]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Duplin-Onslow Cluster (House) [Mattingly Report Figure 33]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Duplin-Onslow Cluster - House] [Mattingly Report Figure 34]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Gaston-Cleveland Cluster (House) [Mattingly Report Figure 35]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Gaston-Cleveland Cluster - House] [Mattingly Report Figure 36]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Guilford Cluster (House) [Mattingly Report Figure 37]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] [Mattingly Report Figure 38]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Mecklenburg Cluster (House) [Mattingly Report Figure 39]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Guilford Cluster - House] |

| Description  | Bates Number (if applicable)   | Objection  |
|--|--|--|
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Nash-Franklin Cluster (House) [Mattingly Report Figure 41]                 |  |  |
| Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Nash-Franklin Cluster- House]<br>[Mattingly Report Figure 42]            |  |  |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: New Haven-Brunswick Cluster (House) [Mattingly Report Figure 43]           |  |  |
| Districts in each plan of the ensemble ordered from least to most Democratic for a given election [New Haven-Brunswick Cluster - House] [Mattingly Report Figure 44]           |  |  |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Person-Vance-Granville-Warren Cluster (House) [Mattingly Report Figure 45] |  |  |
| Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Person-Vance-Granville-Warren Cluster - House] [Mattingly Report Figure 46] |  |  |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Pitt-Lenoir Cluster (House) [Mattingly Report Figure 47]                   |  |  |
| Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Pitt-Lenoir Cluster - House] [Mattingly Report Figure 48]                   |  |  |
| Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Union-Anson Cluster (House) [Mattingly Report Figure 49]                   |  |  |
|  | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Nash-Franklin Cluster (House) [Mattingly Report Figure 41]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Nash-Franklin Cluster- House] [Mattingly Report Figure 42]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: New Haven-Brunswick Cluster (House) [Mattingly Report Figure 43]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [New Haven-Brunswick Cluster - House] [Mattingly Report Figure 44]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Person-Vance-Granville-Warren Cluster (House) [Mattingly Report Figure 45]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Person-Vance-Granville-Warren Cluster - House] [Mattingly Report Figure 46]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Pitt-Lenoir Cluster (House) [Mattingly Report Figure 47]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Pitt-Lenoir Cluster - House] [Mattingly Report Figure 48]  Enacted districting plan, colored by county, municipalities and averaged Democratic for a given election [Pitt-Lenoir Cluster - House] [Mattingly Report Figure 48] | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Nash-Franklin Cluster (House) [Mattingly Report Figure 41]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Nash-Franklin Cluster- House] [Mattingly Report Figure 42]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: New Haven-Brunswick Cluster (House) [Mattingly Report Figure 43]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [New Haven-Brunswick Cluster - House] [Mattingly Report Figure 44]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Person-Vance-Granville-Warren Cluster (House) [Mattingly Report Figure 45]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Person-Vance-Granville-Warren Cluster - House] [Mattingly Report Figure 46]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Pitt-Lenoir Cluster (House) [Mattingly Report Figure 47]  Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Pitt-Lenoir Cluster - House] [Mattingly Report Figure 48]  Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Union-Anson Cluster (House) |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 410       | Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Union-Anson Cluster - House]<br>[Mattingly Report Figure 50]    |                              |           |
| 411       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Wake Cluster (House) [Mattingly Report Figure 51]                 |                              |           |
| 412       | Districts in each plan of the ensemble ordered from least to most Democratic for a given election [Wake Cluster - House] [Mattingly Report Figure 52]                 |                              |           |
| 413       | Enacted districting plan, colored by county, municipalities and averaged Democratic vote fractions: Yadkin-Forsyth Cluster (House) [Mattingly Report Figure 53]       |                              |           |
| 414       | Districts in each plan of the ensemble ordered from least to most<br>Democratic for a given election [Yadkin-Forsyth Cluster - House]<br>[Mattingly Report Figure 54] |                              |           |
| 415       | Range of expected partisan results in the enacted plan and the ensemble for the North Carolina Senate [Mattingly Report Table 1]                                      |                              |           |
| 416       | Range of expected partisan results in the enacted plan and the ensemble for the North Carolina House [Mattingly Report Table 2]                                       |                              |           |
| 417       | Percent chance of electing a given number of Democrats for a given election in the North Carolina Senate. [Mattingly Report Table 3]                                  |                              |           |
| 418       | Percent chance of electing a given number of Democrats for a given election in the North Carolina House. [Mattingly Report Table 4]                                   |                              |           |
| 419       | List of municipalities in a given plan [Mattingly Report Table 5]   |                              |           |
| 420       | Sampling parameters for the Senate clusters [Mattingly Report Table 6]  |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 421       | Sampling parameters for the House clusters [Mattingly Report Table 7]   |                              |           |
| 422       | The districts in each plan of the ensemble ordered from least to most compact -[Mecklenburg Cluster (Senate)] [Mattingly Report Figure 55]                        |                              |           |
| 423       | Comparison of municipal divisions of the enacted plan with the ensemble [Mecklenburg Cluster (Senate)] [Mattingly Report Figure 56]                               |                              |           |
| 424       | The districts in each plan of the ensemble ordered from least to most compact [Wake-Franklin Cluster (Senate)] [Mattingly Report Figure 57]                       |                              |           |
| 425       | Comparison of municipal divisions of the enacted plan with the ensemble [Wake-Franklin Cluster (Senate)] [Mattingly Report Figure 58]                             |                              |           |
| 426       | The districts in each plan of the ensemble ordered from least to most compact [Davie-Forsyth Cluster (Senate)] [Mattingly Report Figure 59]                       |                              |           |
| 427       | Comparison of municipal divisions of the enacted plan with the ensemble [Davie-Forsyth Cluster (Senate)] [Mattingly Report Figure 60]                             |                              |           |
| 428       | The districts in each plan of the ensemble ordered from least to most compact [Bladen-Brunswick-Pender-New Hanover Cluster (Senate)] (Mattingly Report Figure 61) |                              |           |
| 429       | Comparison of municipal divisions of the enacted plan with the ensemble [Bladen-Brunswick-Pender-New Hanover Cluster (Senate)] [Mattingly Report Figure 62]       |                              |           |
| 430       | The districts in each plan of the ensemble ordered from least to most compact [Buncombe-Transylvania-Henderson Cluster (Senate)] [Mattingly Report Figure 63]     |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 431       | Comparison of municipal divisions of the enacted plan with the ensemble [Buncombe-Transylvania-Henderson Cluster (Senate)] [Mattingly Report Figure 64]                |                              |           |
| 432       | The districts in each plan of the ensemble ordered from least to most compact [Guilford-Alamance-Randolph Cluster (Senate)] [Mattingly Report Figure 65]               |                              |           |
| 433       | Comparison of municipal divisions of the enacted plan with the ensemble [Guilford-Alamance-Randolph Cluster (Senate)] [Mattingly Report Figure 66]                     |                              |           |
| 434       | The districts in each plan of the ensemble ordered from least to most compact [Lee-Sampson-Harnett-Duplin-Johnston-Nash Cluster (Senate)] [Mattingly Report Figure 67] |                              |           |
| 435       | Comparison of municipal divisions of the enacted plan with the ensemble [Lee-Sampson-Harnett-Duplin-Johnston-Nash Cluster (Senate)] [Mattingly Report Figure 68]       |                              |           |
| 436       | The districts in each plan of the ensemble ordered from least to most compact [Alamance Cluster (House)] [Mattingly Report Figure 69]                                  |                              |           |
| 437       | Comparison of municipal divisions of the enacted plan with the ensemble [Alamance Cluster House)] [Mattingly Report Figure 70]   |                              |           |
| 438       | The districts in each plan of the ensemble ordered from least to most compact [Buncombe Cluster (House)] [Mattingly Report Figure 71]                                  |                              |           |
| 439       | Comparison of municipal divisions of the enacted plan with the ensemble [Buncombe Cluster House)] [Mattingly Report Figure 72]   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 440       | The districts in each plan of the ensemble ordered from least to most compact [Columbus-Pender-Robeson Cluster (House)] [Mattingly Report Figure 73]                         |                              |           |
| 441       | Comparison of municipal divisions of the enacted plan with the ensemble [Columbus-Pender-Robeson Cluster House)] [Mattingly Report Figure 74]                                |                              |           |
| 442       | The districts in each plan of the ensemble ordered from least to most compact [Cumberland Cluster (House)] [Mattingly Report Figure 75]                                      |                              |           |
| 443       | Comparison of municipal divisions of the enacted plan with the ensemble [Cumberland Cluster House)] [Mattingly Report Figure 76]   |                              |           |
| 444       | The districts in each plan of the ensemble ordered from least to most compact [Davie-Montgomery-Richmond-Cabarrus-Rowan-Stanly Cluster (House)] [Mattingly Report Figure 77] |                              |           |
| 445       | Comparison of municipal divisions of the enacted plan with the ensemble [Davie-Montgomery-Richmond-Cabarrus-Rowan-Stanly Cluster House)] [Mattingly Report Figure 78]        |                              |           |
| 446       | The districts in each plan of the ensemble ordered from least to most compact [Duplin-Onslow Cluster (House)] [Mattingly Report Figure 79]                                   |                              |           |
| 447       | Comparison of municipal divisions of the enacted plan with the ensemble [Duplin-Onslow Cluster House)] [Mattingly Report Figure 80]  |                              |           |
| 448       | The districts in each plan of the ensemble ordered from least to most compact [Gastow-Cleveland Cluster (House)] [Mattingly Report Figure 81]                                |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 449       | Comparison of municipal divisions of the enacted plan with the ensemble [Gastow-Cleveland Cluster House)] [Mattingly Report Figure 82]             |                              |           |
| 450       | The districts in each plan of the ensemble ordered from least to most compact [Guilford Cluster (House)] [Mattingly Report Figure 83]              |                              |           |
| 451       | Comparison of municipal divisions of the enacted plan with the ensemble [Guilford Cluster House)] [Mattingly Report Figure 84]                     |                              |           |
| 452       | The districts in each plan of the ensemble ordered from least to most compact [Mecklenburg Cluster (House)] [Mattingly Report Figure 85]           |                              |           |
| 453       | Comparison of municipal divisions of the enacted plan with the ensemble [Mecklenburg Cluster House)] [Mattingly Report Figure 86]                  |                              |           |
| 454       | The districts in each plan of the ensemble ordered from least to most compact [Nash-Franklin Cluster (House)] [Mattingly Report Figure 87]         |                              |           |
| 455       | Comparison of municipal divisions of the enacted plan with the ensemble [Nash-Franklin Cluster House)] [Mattingly Report Figure 88]                |                              |           |
| 456       | The districts in each plan of the ensemble ordered from least to most compact [New Hanover-Brunswick Cluster (House)] [Mattingly Report Figure 89] |                              |           |
| 457       | Comparison of municipal divisions of the enacted plan with the ensemble [New Hanover-Brunswick Cluster House)] [Mattingly Report Figure 90]        |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 458       | The districts in each plan of the ensemble ordered from least to most compact [Person-Vance-Granville-Warren Cluster (House)] [Mattingly Report Figure 91] |                              |           |
| 459       | Comparison of municipal divisions of the enacted plan with the ensemble [[Person-Vance-Granville-Warren Cluster House)] [Mattingly Report Figure 92]       |                              |           |
| 460       | The districts in each plan of the ensemble ordered from least to most compact [Pitt-Lenoir Cluster (House)] [Mattingly Report Figure 93]                   |                              |           |
| 461       | Comparison of municipal divisions of the enacted plan with the ensemble [(Pitt-Lenoir Cluster House)] [Mattingly Report Figure 94]                         |                              |           |
| 462       | The districts in each plan of the ensemble ordered from least to most compact [Union-Anson Cluster (House)] [Mattingly Report Figure 95]                   |                              |           |
| 463       | Comparison of municipal divisions of the enacted plan with the ensemble [(Union-Anson Cluster House)] [Mattingly Report Figure 96]                         |                              |           |
| 464       | The districts in each plan of the ensemble ordered from least to most compact [Wake Cluster (House)] [Mattingly Report Figure 97]                          |                              |           |
| 465       | Comparison of municipal divisions of the enacted plan with the ensemble [(Wake Cluster House)] [Mattingly Report Figure 98]                                |                              |           |
| 466       | The districts in each plan of the ensemble ordered from least to most compact [Yadkin-Forsyth (House)] [Mattingly Report Figure 99]                        |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 467       | Comparison of municipal divisions of the enacted plan with the ensemble [(Yadkin-Forsyth Cluster House)] [Mattingly Report Figure 100]                        |                              |           |
| 468       | Ranked vote marginals in Mecklenburg and Wake [Mattingly Report Figure 101]   |                              |           |
| 469       | Parameters used when resampling senate clusters [Mattingly Report Table 8]  |                              |           |
| 470       | Difference in the marginal distributions when considering incumbency [Mattingly Report Figure 102]  |                              |           |
| 471       | Number of elections in which the enacted plan is a 1% outlier and a 0.1% outlier favoring either the Republican or the Democrats.  [Mattingly Report Table 9] |                              |           |
| 472       | Difference in the marginal distributions when considering incumbency [Mattingly Report Figure 103]  |                              |           |
| 473       | Difference in the marginal distributions when considering incumbency [Mattingly Report Figure 104]  |                              |           |
| 474       | Ranked marginal distributions of each district in the ensemble from the most to least Republican district [Mattingly Report Figure 105]                       |                              |           |
| 475       | Convergence Statistics for cluster-level ensemble of maps for N.C. Senate [Mattingly Report Table 10]   |                              |           |
| 476       | Convergence Statistics for cluster-level ensemble of maps for N.C. House [Mattingly Report Table 11]  |                              |           |
| 477       | Convergence Statistics for cluster-level ensemble of maps that preserve incumbents [Mattingly Report Table 12]  |                              |           |
| 478       | The total number of maps in the ensemble for the North Carolina Senate, along with the total number of unique maps [Mattingly Report Table 13]                |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 479       | The total number of maps in the ensemble for the North Carolina House, along with the total number of unique maps [Mattingly Report Table 14]   |                              |           |
| 480       | Number of samples gathered for the few additional ensembles gathered in order to test for the effects on the ensemble when preserving incumbency [Mattingly Report Table 15]                                    |                              |           |
| 481       | Number of sub-samples in the North Carolina Senate. [Mattingly Report Table 16]   |                              |           |
| 482       | Number of sub-samples in the North Carolina House. [Mattingly Report Table 17]  |                              |           |
| 483       | Mattingly Report Appendix G - Ranked Marginal Distributions (House)   |                              |           |
| 484       | Mattingly Report Appendix G - Ranked Marginal Distributions (Senate)  |                              |           |
| 485       | Mattingly Report - Zoomed-in Ranked Marginal Distributions (House)  |                              |           |
| 486       | Mattingly Report - Zoomed-in Ranked Marginal Distributions (Senate  |                              |           |
| 487       | Rebuttal Report of Jonathan Mattingly   |                              |           |
| 488       | (Mattingly Rebuttal Report Figure 1)  |                              |           |
| 489       | Statewide distribution of elected Democrats over the 5 different initial conditions for the 2012 and 2016 Presidential vote counts for the North Carolina House and Senate [Mattingly Rebuttal Report Figure 2] |                              |           |
| 490       | [Mattingly Rebuttal Report Figure 3]  |                              |           |
| 491       | Number of elections under the enacted plan is as or more extreme than a given percent of the ensemble of plans, favoring either the Republicans or Democrats.  [Mattingly Rebuttal Report Table 1]              |                              |           |
| 492       | [Mattingly Rebuttal Report Figure 4]  |                              |           |
| 493       | [Mattingly Rebuttal Report Figure 5]  |                              |           |
| 494       | [Mattingly Rebuttal Report Table 2]   |                              |           |
| 495       | [Mattingly Rebuttal Report Figure 6]  |                              |           |
| 496       | [Mattingly Rebuttal Report Table 3]   |                              |           |
| 497       | [Mattingly Rebuttal Report Table 4)]  |                              |           |
| 498       | [Mattingly Rebuttal Report Table 5]   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 499       | [Mattingly Rebuttal Report Figure 7]   |                              |           |
| 500       | [Mattingly Rebuttal Report Figure 8]   |                              |           |
| 501       | [Mattingly Rebuttal Report Table 6]  |                              |           |
| 502       | [Mattingly Rebuttal Report Table 7]  |                              |           |
| 503       | [Mattingly Rebuttal Report Table 8]  |                              |           |
| 504       | [Mattingly Rebuttal Report Table 9]  |                              |           |
| 505       | [Mattingly Rebuttal Report Figure 9]   |                              |           |
| 506       | [Mattingly Rebuttal Report Figure 10]  |                              |           |
| 507       | [Mattingly Rebuttal Report Table 10]   |                              |           |
| 508       | Expert Report of Wesley Pegden   |                              |           |
| 509       | Wesley Pegden, Ph.D Curriculum Vitae<br>(Exhibit A to Pegden Report)   |                              |           |
| 510       | Article - Chikina, Maria et al. "Assessing significance in a Markov chain without mixing" (Exhibit B to Pegden Report) |                              |           |
| 511       | Chikina, Maria et al., "Practical Tests for Significance in Markov<br>Chains"<br>(Exhibit C to Pegden Report)          |                              |           |
| 512       | Random changes to a map (VTD) [Pegden Report Map 1]  |                              |           |
| 513       | Random changes to a map (geounit) [Pegden Report Map 2]  |                              |           |
| 514       | Comparison map examples (House) [Pegden Report Map 3]  |                              |           |
| 515       | Whole state with 2016 voting data (House) [Pegden Report Table 1]  |                              |           |
| 516       | Districts redrawn in 2017, with 2016 voting data (House) [Pegden Report Table 2]                                       |                              |           |
| 517       | Unchanged 2011 districts with 2008 voting data (House) (Pegden Report Table 3)   |                              |           |
| 518       | Comparison map examples (Senate) [Pegden Report Map 4]   |                              |           |
| 519       | Whole state with 2016 voting data (Senate) [Pegden Report Table 4]   |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 520       | Districts redrawn in 2017, with 2016 voting data (Senate) [Pegden Report Table 5] |                              |           |
| 521       | Unchanged 2011 districts with 2008 voting data (Senate) [Pegden Report Table 6)   |                              |           |
| 522       | Alamance County (House) [Pegden Report Figure 1]                                  |                              |           |
| 523       | Anson/Union Custer (House) [Pegden Report Figure 2]                               |                              |           |
| 524       | Brunswick/New Hanover Cluster (House) [Pegden Report Figure 3]                    |                              |           |
| 525       | Buncombe County (House) [Pegden Report Figure 4]                                  |                              |           |
| 526       | Pender/Columbus/Robeson Cluster (House) [Pegden Report Figure 5]                  |                              |           |
| 527       | Guilford Cluster (House) [Pegden Report Figure 6]                                 |                              |           |
| 528       | Duplin/Onslow Cluster (House) [Pegden Report Figure 7]                            |                              |           |
| 529       | Cumberland County (House) [Pegden Report Figure 8]                                |                              |           |
| 530       | Forsyth/Yadkin Cluster (House) [Pegden Report Figure 9]                           |                              |           |
| 531       | Mecklenburg (House) [Pegden Report Figure 10]                                     |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 532       | Lenoir/Pitt (House) [Pegden Report Figure 11]  |                              |           |
| 533       | Wake (House) [Pegden Report Figure 12]   |                              |           |
| 534       | Gaston/Cleveland Cluster (House) [Pegden Report Figure 13]                                 |                              |           |
| 535       | Richmond/Montgomery/Stanly-Cabarrus-Rowan/ Davie Cluster (House) [Pegden Report Figure 14] |                              |           |
| 536       | Person/Granville/Vance/Warren Cluster (House) [Pegden Report Figure 15]                    |                              |           |
| 537       | Franklin/Nash Cluster (House) [Pegden Report Figure 16]                                    |                              |           |
| 538       | Davie/Forsyth (Senate) [Pegden Report Figure 17]   |                              |           |
| 539       | Franklin/Wake (Senate) [Pegden Report Figure 18]   |                              |           |
| 540       | Mecklenburg (Senate) [Pegden Report Figure 19]   |                              |           |
| 541       | Transylvania-Henderson-Buncombe (Senate) [Pegden Report Figure 20]                         |                              |           |
| 542       | Lee/Sampson/Harnett/Duplin/Johnston/Nash (Senate) [Pegden Report Figure 21]                |                              |           |
| 543       | Randolph/Guilford/Alamance (Senate) [Pegden Report Figure 22]                              |                              |           |
| 544       | Bladen/Pender/Brunswick/New Hanover (Senate) [Pegden Report Figure 23]                     |                              |           |

| Description   | Bates Number (if applicable)   | Objection   |
|---|--|---|
| Robustness to the choice of compactness metric<br>Results for House<br>[Pegden Report Table 7]                            |  |   |
| Robustness to the choice of compactness metric<br>Example maps for perimeter constraint (House)<br>[Pegden Report Map 5]  |  |   |
| Robustness to the choice of compactness metric<br>Results for Senate<br>[Pegden Report Table 8]                           |  |   |
| Robustness to the choice of compactness metric<br>Example maps for perimeter constraint (Senate)<br>[Pegden Report Map 6] |  |   |
| Robustness to election / partisan metric<br>Results for House<br>[Pegden Report Table 9]                                  |  |   |
| Robustness to election / partisan metric<br>Results for Senate<br>[Pegden Report Table 10]                                |  |   |
| Rebuttal Report of Wesley Pegden  |  |   |
| Pegden Rebuttal Report Figure 1.1   |  |   |
| Pegden Rebuttal Report Figure 1.2   |  |   |
| Pegden Rebuttal Report Figure 1.3   |  |   |
| Pegden Rebuttal Report Figure 1.4   |  |   |
| Pegden Rebuttal Report Figure 1.5   |  |   |
| Pegden Rebuttal Report Figure 1.6   |  |   |
|   | Robustness to the choice of compactness metric Results for House [Pegden Report Table 7]  Robustness to the choice of compactness metric Example maps for perimeter constraint (House) [Pegden Report Map 5]  Robustness to the choice of compactness metric Results for Senate [Pegden Report Table 8]  Robustness to the choice of compactness metric Example maps for perimeter constraint (Senate) [Pegden Report Map 6]  Robustness to election / partisan metric Results for House [Pegden Report Table 9]  Robustness to election / partisan metric Results for Senate [Pegden Report Table 10]  Rebuttal Report of Wesley Pegden  Pegden Rebuttal Report Figure 1.1  Pegden Rebuttal Report Figure 1.2  Pegden Rebuttal Report Figure 1.4  Pegden Rebuttal Report Figure 1.5 | Robustness to the choice of compactness metric Results for House [Pegden Report Table 7]  Robustness to the choice of compactness metric Example maps for perimeter constraint (House) [Pegden Report Map 5]  Robustness to the choice of compactness metric Results for Senate [Pegden Report Table 8]  Robustness to the choice of compactness metric Example maps for perimeter constraint (Senate) [Pegden Report Map 6]  Robustness to election / partisan metric Results for House [Pegden Report Table 9]  Robustness to election / partisan metric Results for Senate [Pegden Report Table 10]  Rebuttal Report Table 10]  Rebuttal Report of Wesley Pegden  Pegden Rebuttal Report Figure 1.1  Pegden Rebuttal Report Figure 1.2  Pegden Rebuttal Report Figure 1.4  Pegden Rebuttal Report Figure 1.5 |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 558       | Pegden Rebuttal Report Figure 1.7  |                              |           |
| 559       | Rebuttal Report of Lisa Handley  |                              |           |
| 560       | Lisa Handley- Curriculum Vitae   |                              |           |
| 561       | Elections with African American Candidates that Dr. Lewis Used or Chose Not to Use in His Analysis [Handley Rebuttal Report Table 1] |                              |           |
| 562       | NC House J-25 -Plan properties screenshot  |                              |           |
| 563       | NC House Master July 18, 1200 -Plan properties screenshot  |                              |           |
| 564       | NC House w New Raleigh - June 28 ~ Plan properties screenshot  |                              |           |
| 565       | NC Senate J-24 - Plan properties screenshot  |                              |           |
| 566       | NC Senate Master July 11 0115 Plan properties screenshot   |                              |           |
| 567       | Plan properties screenshot from NC House A-1 from 20170811   |                              |           |
| 568       | Plan properties screenshot from NC House J-3 from 20170814   |                              |           |
| 569       | Plan properties screenshot from NC House J-25 from 20170628  |                              |           |
| 570       | Plan properties screenshot from NC House J-25 from 20170814  |                              |           |
| 571       | Plan properties screenshot from NC Senate J-23 from 20170813   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 572       | Plan properties screenshot from NC Senate J-24 from 20170624   |                              |           |
| 573       | Plan properties screenshot from NC Senate J-24 from 20170712   |                              |           |
| 574       | Dickson, et al v. Rucho - Defendants - Appellees' Brief  |                              |           |
| 575       | Dickson, et al v. Rucho - Defendants - Appellees' Brief on Remand  |                              |           |
| 576       | Fain, Travis. "Did House leader see new district 'long time before we did'?' WRAL.com,September 27, 2017.  |                              |           |
| 577       | Blake Esselstyn- Curriculum Vitae  |                              |           |
| 578       | Jon Matthews- Curriculum Vitae   |                              |           |
| 579       | Legislative Defendants' & State of North Carolina Responses to Plaintiffs' First Set of Interrogatories, dated January 4, 2019   |                              |           |
| 580       | State Defendants' Responses to Plaintiffs' First Set of Interrogatories, dated January 7, 2019   |                              |           |
| 581       | Legislative Defendants' Objections and Responses to Plaintiffs' Second Set of Interrogatories, dated February 15, 2019   |                              |           |
| 582       | Legislative Defendants' Objections and Responses to Plaintiffs' Third Set of Interrogatories, dated February 15, 2019  |                              |           |
| 583       | Defendant- Intervenor's Responses to Plaintiffs' First Set of Interrogatories and Request for Production of Documents to Individual Defendant-Intervenors, dated April 3, 2019   |                              |           |
| 584       | Legislative Defendants' Second Supplemental Objections and<br>Responses to Plaintiffs' First Set of Interrogatories, dated, April 3,<br>2019                                     |                              |           |
| 585       | Defendant- Intervenor's Responses to Plaintiffs' Second Set of Interrogatories and Request for Production of Documents to Individual Defendant-Intervenors, dated April 11, 2019 |                              |           |
| 586       | Legislative Defendants' Supplemental Objections and Responses to<br>Plaintiffs' Fourth Set of Interrogatories and Requests for Production,<br>dated, April 30, 2019              |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 587       | Legislative Defendants' Objections and Responses to Plaintiffs' First<br>Request for admission, dated February 15, 2019 | (ii application)             |           |
| 588       | 2017 House and Senate Plans Criteria  | LDNC001883                   |           |
| 589       | Map of 2017 House Redistricting Plan  |                              |           |
| 590       | August 28, 2017 House Floor Session   |                              |           |
| 591       | Stat Pack for 2017 House Plan   |                              |           |
| 592       | Additional Statistics on 2017 House Redistricting Plans   |                              |           |
| 593       | August 28, 2017 Senate Floor Session  |                              |           |
| 594       | Map of 2017 Senate Redistricting Plan   |                              |           |
| 595       | August 29, 2017 Senate Redistricting Committee Meeting  |                              |           |
| 596       | August 29, 2017 House Select Committee on Redistricting   |                              |           |
| 597       | Stat Pack for 2017 Senate Redistricting Plan  |                              |           |
| 598       | August 30, 2017 Senate Floor Session  |                              |           |
| 599       | Additional Statistics on 2017 Senate Redistricting Plans  |                              |           |
| 600       | August 30, 2017 House Floor Session   |                              |           |
| 601       | July 26, 2017 Joint Redistricting Committee Meeting   |                              |           |
| 602       | August 4, 2017 Joint Redistricting Committee Meeting  |                              |           |
| 603       | August 10, 2017 Joint Redistricting Committee Meeting   |                              |           |
| 604       | August 25, 2017 Senate Floor Session  |                              |           |
| 605       | August 25, 2017 House Select Committee on Redistricting Meeting   |                              |           |
| 606       | August 24, 2017 Senate Redistricting Committee Meeting  |                              |           |
| 607       | Raleigh Public Hearing Transcript   |                              |           |
| 608       | Beaufort Public Hearing Transcript  |                              |           |
| 609       | Charlotte Public Hearing Transcript   |                              |           |
| 610       | Fayetteville Public Hearing Transcript  |                              |           |
| 611       | Hudson Public Hearing Transcript  |                              |           |
| 612       | Jamestown Public Hearing Transcript   |                              |           |
| 613       | Weldon Public Hearing Transcript  |                              |           |
| 614       | Rep Pittman Amendment   |                              |           |
| 615       | Rep Jackson Amendment - Redistricting Committee   |                              |           |
| 616       | Rep Lewis Amendment   |                              |           |
| 617       | Rep Speciale Amendment  |                              |           |
| 618       | Sen Blue Amendment - Redistricting Committee  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 619       | Sen Blue Amendment - Senate Floor  |                              |           |
| 620       | Sen Blue Amendment - Senate Floor Failed                                       |                              |           |
| 621       | Sen Robinson Amendment - Withdrawn   |                              |           |
| 622       | Sen Jeff Jackson Amendment   |                              |           |
| 623       | Sen Robinson Amendment - Failed  |                              |           |
| 624       | Sen Clark Amendment - Senate Floor   |                              |           |
| 625       | Sen Clark Amendment - Redistricting Committee                                  |                              |           |
| 626       | Rep Hunter Amendment   |                              |           |
| 627       | House Bill 927 - Public Law  |                              |           |
| 628       | Senate Bill 691 - Public Law   |                              |           |
| 629       | Legislative Defendants Filing in <i>Covington</i> Attaching Legislative Record |                              |           |
| 630       | Public Policy Polling-2018   |                              |           |
| 631       | Senate Bill 285  |                              |           |
| 632       | House Bill 824   |                              |           |
| 633       | Senate Bill 25   |                              |           |
| 634       | House Bill 252   |                              |           |
| 635       | H927 Bill History  |                              |           |
| 636       | House vote (third reading) for House plan                                      |                              |           |
| 637       | House vote (third reading) for Senate plan                                     |                              |           |
| 638       | s691 Bill History  |                              |           |
| 639       | Senate vote (third reading) for House plan                                     |                              |           |
| 640       | Senate vote (third reading) for Senate plan                                    |                              |           |
| 641       | Contract dated June 27, 2017   | LDNC001879-<br>LDNC001880    |           |
| 642       | Invoice dated September 1, 2017  | LDNC001881                   |           |
| 643       | Email from D. Lewis dated August 11, 2017                                      | LDNC001882                   |           |
| 644       | Common Cause Summary Stats   | CC-00001                     |           |
| 645       | 2018 Campaign Finance Breakdown  | NCDP<br>0039343              |           |
| 646       | State Senate District Snapshots  |                              |           |
| 647       | State House District Snapshots   |                              |           |
| 648       | Letter to NC DOJ, dated May 3, 2019  |                              |           |
| 649       | T. Hofeller Media Received from Arnold & Porter Kaye Scholer LLP               |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 650       | Letter to Setec Investigations dated May 3, 2019                                       |                              |           |
| 651       | T. Hofeller Media Received from Arnold & Porter Kaye Scholer LLP                       |                              |           |
| 652       | Letter to Virtacore Systems,dated May 3, 2019  |                              |           |
| 653       | T. Hofeller Media Received from Arnold & Porter Kaye Scholer LLP                       |                              |           |
| 654       | Declaration of Staci Goede on Behalf of the Republican State<br>Leadership             |                              |           |
| 655       | Declaration of Staci Goede on Behalf of the State Government<br>Leadership             |                              |           |
| 656       | Republican State Leadership Overview   | RSLC0000101<br>9-21          |           |
| 657       | Redistricting 2010, Preparing for Success, RSLC June 7, 2009<br>PowerPoint slides      |                              |           |
| 658       | RSLC Announces Redistricting Majority Project (REDMAP) - Press release                 |                              |           |
| 659       | Redistricting Majority Project PowerPoint slides                                       |                              |           |
| 660       | REDMAP Political Report July 2010  |                              |           |
| 661       | REDMAP Political Report July 2010  |                              |           |
| 662       | E-mail to Tom Hofeller from Lindsay Fisher 05-23-08<br>Dear Legislative Leaders letter |                              |           |
| 663       | Dear Legislative Leaders letter from Chris Jankowski                                   |                              |           |
| 664       | Final REDMAP Report  |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 665       | REDMAP 2012 Summary Report   |                              |           |
| 666       | REDMAP Political Report Final Report   |                              |           |
| 667       | 2012 RSLC Year in Review   |                              |           |
| 668       | 2012 Cycle Redistricting Budget  |                              |           |
| 669       | 2030 - What I've Learned about Redistricting The Hard Way!<br>January 24, 2011 PowerPoint slides                     |                              |           |
| 670       | E-mail re TBH Travel to Raleigh May 21, 2012   |                              |           |
| 671       | 2011 Geographic Strategies invoices to Ogletree Deakins  |                              |           |
| 672       | E-mail to Matt Walter from Chris Jankowski 2012-02-24 re Req for Payment and inv for Geographic Strategies           |                              |           |
| 673       | Letter from Robin Hayes, RSLC  |                              |           |
| 674       | Printout of Facebook Post, dated April 16, 2019 [Exhibit 2 to R. Reid Deposition]                                    |                              |           |
| 675       | Printout of Facebook Post, dated April 10, 2019 [Exhibit 3 to R. Reid Deposition]                                    |                              |           |
| 676       | Subpoena - Stephanie Hofeller [Exhibit 1 to S. Hofeller Deposition]  |                              |           |
| 677       | Photographs of T. Hofeller Media Received from Arnold & Porter Kay Scholer LLP [Exhibit 2 to S. Hofeller Deposition] |                              |           |
| 678       | Aaron Matthew Wolff Affidavit  |                              |           |
| 679       | Alyce Machak Affidavit   |                              |           |
| 680       | Amy Oseroff Affidavit  |                              |           |
| 681       | Ann McCracken Affidavit  |                              |           |
| 682       | Carlton Campbell Affidavit   |                              |           |
| 683       | David Dwight Brown Affidavit   |                              |           |
| 684       | Deborah Anderson Smith Affidavit   |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 685       | Derrick Miller Affidavit   |                              |           |
| 686       | Donald Rumph Affidavit   |                              |           |
| 687       | Dwight Jordan Affidavit  |                              |           |
| 688       | Electa Person Affidavit  |                              |           |
| 689       | George David Gauck Affidavit                                     |                              |           |
| 690       | Howard Du Bose Affidavit   |                              |           |
| 691       | James Nesbit Affidavit   |                              |           |
| 692       | Joesph Thomas Gates Affidavit                                    |                              |           |
| 693       | John Balla Affidavit   |                              |           |
| 694       | John Mark Turner Affidavit                                       |                              |           |
| 695       | Joshua Brown Affidavit   |                              |           |
| 696       | Julie Frey Affidavit   |                              |           |
| 697       | Karen Sue Holbrook Affidavit                                     |                              |           |
| 698       | Kathleen Barnes Affidavit  |                              |           |
| 699       | Kristin Parker Affidavit   |                              |           |
| 700       | Leon Schaller Affidavit  |                              |           |
| 701       | Lesley Wischmann Affidavit                                       |                              |           |
| 702       | Mark Peters Affidavit  |                              |           |
| 703       | Nancy Bradley Affidavit  |                              |           |
| 704       | Nicole Quick Affidavit   |                              |           |
| 705       | Pamela Morton Affidavit  |                              |           |
| 706       | Paula Chapman Affidavit  |                              |           |
| 707       | Rebecca Harper Affidavit   |                              |           |
| 708       | Rebecca Johnson Affidavit  |                              |           |
| 709       | Rosalyn Sloan Affidavit  |                              |           |
| 710       | Stephen Douglas McGrigor Affidavit                               |                              |           |
| 711       | Tom Dunn Affidavit   |                              |           |
| 712       | Vinod Thomas Affidavit   |                              |           |
| 713       | Virginia Brien Affidavit   |                              |           |
| 714       | William Service  |                              |           |
| 715       | Jowei Chen Trial Subpoena  |                              |           |
| 716       | Christopher Cooper Trial Subpoena                                |                              |           |
| 717       | Lisa Handley Trial Subpoena                                      |                              |           |
| 718       | Jonathan Mattingly Trial Subpoena                                |                              |           |
| 719       | Wesley Pegden Trial Subpoena                                     |                              |           |
| 720       | NC General Assembly - 2011 Redistricting Database - Field Layout |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 721       | Analysis of selected Democratic primary election contests and areas [Lewis Table 2]  |                              |           |
| 722       | Analysis of selected general election contests and areas [Lewis Table 3]   |                              |           |
| 723       | Analysis of a hypothetical 2016 general election contest in various areas [Lewis Table 4]  |                              |           |
| 724       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170705_130329_toshibaInc2731\C\MPRwork\NC Plans\NC Senate J-24 Backups\NC Senate J-24003.bak.zip                              |                              |           |
| 725       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170807_211230_toshibaInc3011\C\MPRwork\NC Plans\NC House J-25 Backups\NC House J-25003.bak.zip                                |                              |           |
| 726       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20150328_151333_toshiba\C\MPRwork\NCPlans\N C Senate Master July 11 0115 Backups\NC Senate Master July 11 0115001.bak.zip       |                              |           |
| 727       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20150328_151333_toshiba\C\MPRwork\NCPlans\N C House Master July 18 1200 Backups\NC House Master July 18 1200001.bak.zip         |                              |           |
| 728       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20150328_151333_toshiba\C\MPRwork\NCPlans\N C House w New Raleigh - June 28 Backups\NC House w New Raleigh - June 28005.bak.zip |                              |           |
| 729       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170628_120524_toshibaInc2724\C\MPRwork\NC Plans\NC House J-25 Backups\NC House J-25003.bak.zip                                |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
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| 730       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170624_093938_toshibaInc2590\C\MPRwork\NC Plans\NC Senate J-24 Backups\NC Senate J-24001.bak.zip |                              |           |
| 731       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170814_071931_toshibaInc3051\C\MPRwork\NC Plans\NC House J-25 Backups\NC House J-25003.bak.zip   |                              |           |
| 732       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170813_172720_toshibaInc3047\C\MPRwork\NC Plans\NC Senate J-23 Backups\NC Senate J-23005.bak.zip |                              |           |
| 733       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170811_083948_toshibaInc3039\C\MPRwork\NC Plans\NC House A-1 Backups\NC House A-1001.bak.zip     |                              |           |
| 734       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170814_203114_toshibaInc3065\C\MPRwork\NC Plans\NC House J-3 Backups\NC House J-3003.bak.zip     |                              |           |
| 735       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170624_093938_toshibaInc2590\C\MPRwork\NC Plans\NC Senate J-24 Backups\NC Senate J-24001.bak.zip |                              |           |
| 736       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170712_151351_toshibaInc2792\C\MPRwork\NC Plans\NC Senate J-24 Backups\NC Senate J-24005.bak.zip |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 737       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20161025_151544_toshibaInc1350\C\Users\toshiba\Documents\Tom\2017 Redistricting\FORMULA FOR POLITICAL ANALYSIS OF LEGISLATIVE DISTRICTS.docx |                              |           |
| 738       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170607_152743_toshibaInc2347\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\NC House Plan June 7.xls                                  |                              |           |
| 739       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20161201_112948_toshibaInc1350\C\Users\toshiba\Documents\Tom\2017 Redistricting\House Minimum-Partisan-Members D.xlsx                        |                              |           |
| 740       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20161201_112948_toshibaInc1350\C\Users\toshiba\Documents\Tom\2017 Redistricting\House Minimum-Partisan-Members.xlsx                          |                              |           |
| 741       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170612_230105_toshibaInc2436\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members D.xlsx                     |                              |           |
| 742       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170613_171944_toshibaInc2453\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\NC Senate Minimum-Partisan J-2.xlsx                       |                              |           |
| 743       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170615_103911_toshibaInc2461\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members J-2.xlsx                   |                              |           |

| Exhibit # | Description   | Bates Number (if applicable) | Objection |
|-----------|---|------------------------------|-----------|
| 744       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170618_062153_toshibaInc2502\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members J-2.xlsx                     |                              |           |
| 745       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170613_104847_toshibaInc2443\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\Senate Minimum-Partisan-Members J-2.xlsx                    |                              |           |
| 746       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170613_103309_toshibaInc2442\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\Senate Minimum-Partisan-Members.xlsx                        |                              |           |
| 747       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170615_103911_toshibaInc2461\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\Senate Minimum-Partisan-Members J-2.xlsx                    |                              |           |
| 748       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170624_121146_toshibaInc2595\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\PPI Indicator Votes for New 2017 Legislative Districts.xlsx |                              |           |
| 749       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20161201_112948_toshibaInc1350\C\Users\toshiba\Documents\Tom\2017 Redistricting\House Minimum Renumbered.xls                                   |                              |           |
| 750       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170531_084929_toshibaInc2210\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members D.xlsx                       |                              |           |

| Exhibit # | Description  | Bates Number (if applicable) | Objection |
|-----------|--|------------------------------|-----------|
| 751       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170608_095810_toshibaInc2357\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members D.xlsx      |                              |           |
| 752       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170612_230105_toshibaInc2436\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\House Minimum-Partisan-Members.xlsx        |                              |           |
| 753       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20161201_112948_toshibaInc1350\C\Users\toshiba\Documents\Tom\2017 Redistricting\Johnston Senate Switch.xlsx                   |                              |           |
| 754       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170708_130532_toshibaInc2751\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\NC Senate CCNC Sample Plan - June 2017.xls |                              |           |
| 755       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170708_200016_toshibaInc2756\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\NC Senate CCNC PPI.xlsx                    |                              |           |
| 756       | C\Seagate Dashboard 2.0\TOSHIBA-PC\toshiba\Backup\f7bc3748-d314-4cc2-a86b-ea77894bb5b2\20170705_130329_toshibaInc2731\C\Users\toshiba\Documents\Tom\NC 2017 Redistricting\NC House CCNC Sample Plan - June 2017.xls  |                              |           |
| 757       | Email from Woodrow to Myers, dated June 29, 2017   | LDNC 014005                  |           |
| 758       | Email from Inman to Boughton, dated August 22, 2019  | LDNC 014109                  |           |
| 759       | Email from Hofeller to Long, dated February 10, 2011 (produced in <i>Dickson</i> )   | PS_00010258                  |           |
| 760       | Email from Farr to Hofeller, dated March 10, 2011 (produced in Dickson)  | PS_00010278                  |           |

| Exhibit # | Description  | Bates Number    | Objection |
|-----------|--|-----------------|-----------|
|           |  | (if applicable) |           |
| 761       | Email from Hofeller to Rucho & Farr, dated May 27, 2011 (produced in Dickson)                                | PS_00010318     |           |
| 762       | Email from Farr to Hofeller, dated May 27, 2011 (produced in Dickson)  | PS_00010320     |           |
| 763       | Email from Raupe to Hofeller, dated June 13, 2011 (produced in Dickson)                                      | PS_00010322     |           |
| 764       | 2011 House Partisan Scoring Spreadsheet (produced in Dickson)  | PS_00010323     |           |
| 765       | Email from Kay to Farr, dated June 30, 2011 (produced in Dickson)  | PS_00010434     |           |
| 766       | Email from Woodcox to Farr, dated June 30, 2011 (produced in Dickson)  | PS_00010435     |           |
| 767       | Email from Woodcox to Blaine, DATED June 30, 2011 (produced in Dickson)                                      | PS_00010436     |           |
| 768       | Remaining Redistricting Preparation Tasks , dated February 2, 2011 (produced in Dickson)                     | PS_00010833     |           |
| 769       | 2011 Redistricting Database Construction Status and Recommendations , January 14, 2011 (produced in Dickson) | PS_00010956     |           |
| 770       | Declaration of Jon G. Matthews   |                 |           |
| 771       | Files Reviewed and Relied Upon by the Plaintiffs' Experts  |                 |           |
| 772       | Mattingly Swing Animations   |                 |           |

<sup>\*</sup>Plaintiffs reserve the right to use additional exhibits for cross-examination and in rebuttal.